

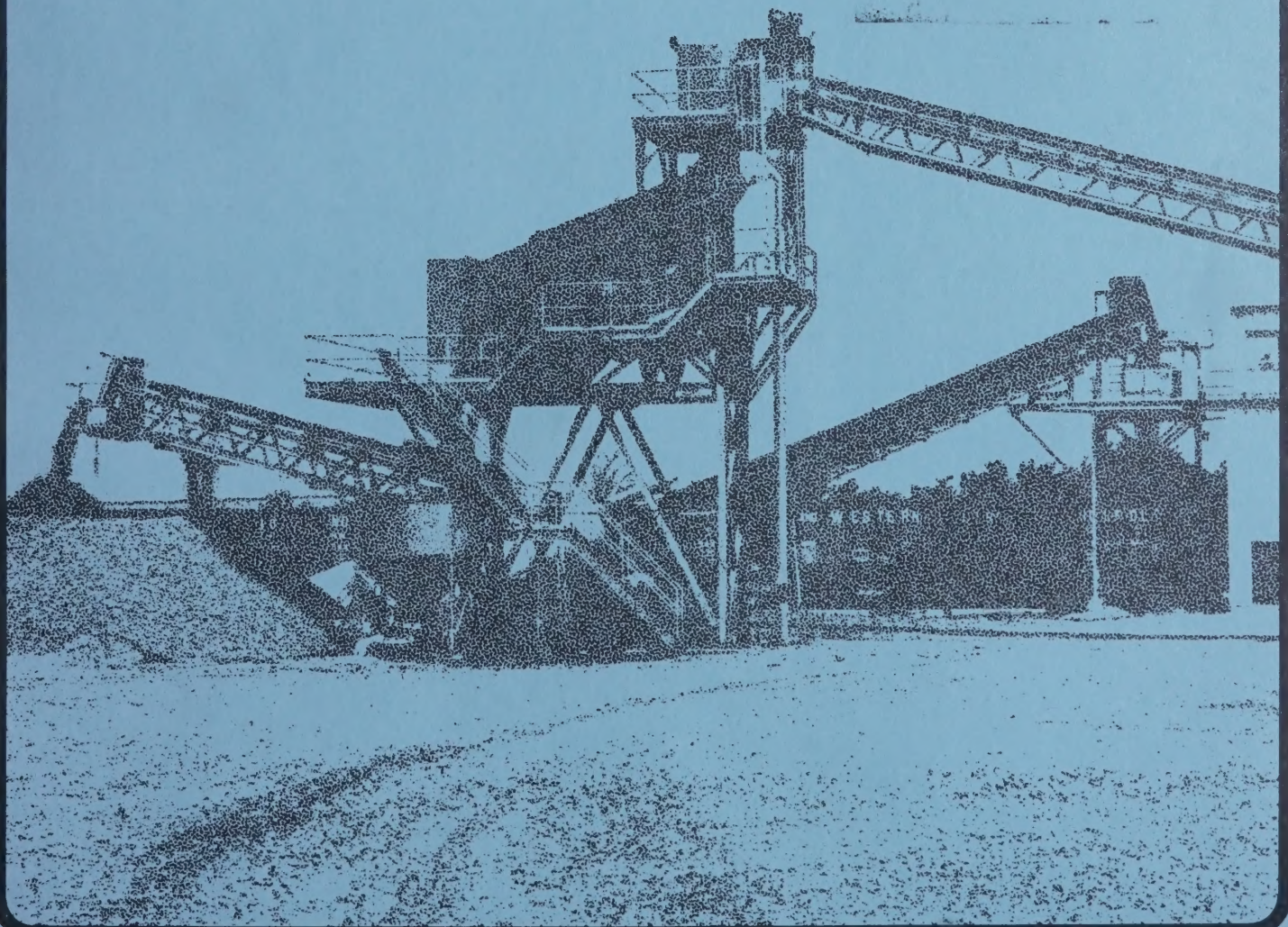
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George V. Voinovich, Governor
DEPARTMENT OF NATURAL RESOURCES
Frances S. Buchholzer, Director
DIVISION OF GEOLOGICAL SURVEY
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1989 REPORT ON OHIO MINERAL INDUSTRIES

WITH
DIRECTORIES OF REPORTING
COAL AND INDUSTRIAL MINERAL OPERATORS

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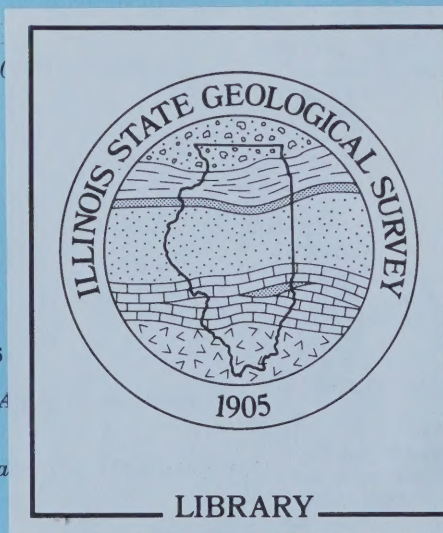
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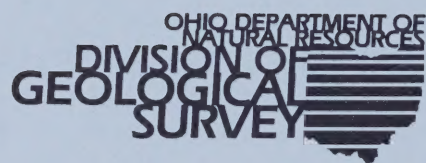
1989 REPORT ON OHIO MINERAL INDUSTRIES

WITH
DIRECTORIES OF REPORTING
COAL AND INDUSTRIAL MINERAL OPERATORS

compiled by
Sherry W. Lopez

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Cover photo: Rail loadout facility at National Lime & Stone Company's new Findlay Plant limestone quarry. See article on planning and opening a new operation beginning on p. 1.

FOREWORD

There are many changes and additions to the 1989 *Report on Ohio mineral industries*. One change and one addition concern the *Numerical index of operators of mines shown on 1989 mineral industries map of Ohio, by commodity*. The index is now included at the end of the report. However, separate copies of the map and numerical index are still available. The numerical index also now includes the State mine number and the Division of Reclamation permit number (when applicable) for each mine shown on the map. Both modifications to the numerical index are the result of suggestions from readers of the report.

National ranking has been added to the text discussion for each commodity if the information has been published by the U.S. Bureau of Mines or the U.S. Department of Energy. It is interesting to note that Ohio ranks in the top 10 nationally for quite a few mineral commodities.

The graphs of mineral sales and value have been redone on the Survey's Intergraph computer-aided drafting (CAD) system. The system is designed to reduce the amount of time required to create, update, or change graphic designs.

The list of *Ohio producing coal companies* has been deleted and the information included in the *Alphabetical directory of reporting producing coal-mine operators*. The lists of producing industrial mineral companies can still be found preceding the by-county directories for each industrial mineral commodity.

Table 20, *Ohio sand sales, by county and type*, and table 21, *Ohio gravel sales, by county and type*, have been combined to form the new table 20, *Ohio sand and gravel sales, by county and type*. Total sand and gravel sales by county are now given.

The section of the report on annual *Oil and gas activity* has been reduced to avoid duplication of information published by the Division of Oil and Gas. The text discussion is more brief, and table 29 (Ten most active counties), table 30 (Ohio well permits), and table 31 (Crude oil and gas production and reserves) have been omitted. Interested readers should contact the Division of Oil and Gas for a copy of its annual report.

Many readers noticed a major change in the 1988 *Report on Ohio mineral industries* that was not mentioned in that year's Foreword—the type of paper on which the report was printed was different than in previous years. Although it appeared to be a higher quality paper, the report actually was printed on recycled paper. The 1989 report is also printed on recycled paper. As part of the 1990 Earth Day celebration, the Ohio Department of Natural Resources and the Ohio Environmental Protection Agency were chosen by then-Governor Celeste to serve as pilot projects for using recycled paper for all printed material. Recycled paper is defined as paper with at least 50 percent wastepaper content.

In 1987, it was mentioned in the *Foreword* that the Division of Geological Survey and the University of Akron were sponsoring an annual *Ohio's Mineral Industries Teachers Workshop*. The fourth extremely successful workshop was conducted in July 1990. To learn more about the workshop and how the public's opinion on Ohio's mining industries is being changed, read the article in this report entitled *Ohio's mineral industries teachers workshop: a positive approach to a positive image*.

As usual, all of the changes and additions have been made to increase the clarity and usefulness of the report. Any comments on how this report can better serve those interested in mineral resources in Ohio are always welcome.

Sherry W. Lopez
Geologist and
Mineral Statistician

Errata for
1988 report
now available
upon request

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MAP

1989 Mineral industries map of Ohio

accompanying report

GREEN-FIELD PROBLEMS BECOME OPPORTUNITIES FOR NATIONAL LIME & STONE

by the Staff of National Lime & Stone Company, Findlay, Ohio

Reprinted with minor revision from Stone Review, October 1989

A dilemma faced the National Lime & Stone Company several years ago when the decision was made to close the old Findlay, Ohio, quarry and build a new green-field operation.¹ National Lime & Stone Company, headquartered in Findlay, Ohio, is the largest supplier of crushed limestone in Ohio. For several years, the company had realized that depleting reserves would necessitate a new plant by 1990 or 1991. However, National signed a long-term contract to supply ballast in the upper Midwest for the Norfolk Southern Corp. railroad, which caused the timing for the new plant to be moved forward.



The interim plant began running almost as soon as the overburden was removed. Among the construction projects using some of the first stone from the quarry were access roads, parking lots, and the operation's office building. In keeping with its good-neighbor and environmental-soundness policies, landscaping followed shortly afterwards.

In planning for the plant, National President Carleton Palmer outlined the priorities that were to be considered. The four main items were environmental considerations, aesthetics, a good-neighbor policy, and the plant's design.

As soon as National purchased the property for the new plant site, all the neighbors were individually contacted to explain the proposed plans. This effort helped greatly in having the land rezoned for quarrying. Prior to breaking ground for the facility, each neighbor was again personally visited. At that time, the neighbors were offered a house inspection.

"We also hired a hydrologist to check the effect on the water level as the quarry was developed," noted Vice President—Marketing Ron Kruse, "and now the neighbors are being invited to an open house. All of this attention to community relations is really paying dividends."



Key members of the National Lime & Stone team during a tour of the operation. From left: Elroy (Jack) Kitzler, George Wisti, and Ron Kruse.

In designing the plant, Elroy (Jack) Kitzler, Vice President—Engineering, and George Wisti, Vice President—Operations, decided the new quarry would be environmentally sound and fully automatic for maximum efficiency and flexibility. The process would require designing to maximize railroad ballast, the product that would drive the plant.

Here a dilemma came into play: in a normal green-field operation, it takes about a year to start operating. Most often, that first year is spent moving a half-million tons or so of stone to develop the working face. Shot rock from the quarry development is stockpiled until it can be processed once the plant is established. "This," Wisti pointed out, "ties

¹A green-field operation refers to opening a new quarry—turning a green field into a quarry.



National designed the plant to load out 1,000 tons of ballast per hour using 60-car trains, making the rail loadout facility a constant hub of activity.

up a lot of capital for a year or more. Our objective was to utilize the stone immediately, reducing the time capital would be unproductive."

Under the plan developed by Kistler and his staff, a small interim plant was built, using equipment available in the company and equipment purchased for the new plant. The interim plant started running almost as soon as the 1 foot of overburden was removed.

As a result, National started using stone immediately for construction at the 212-acre site—for such things as the access road, environmental barriers, site preparation, parking lots, etc.—and also started producing for inventory.

The new plant is designed to produce a maximum amount of 2-inch by 1-inch material, and is designed to load out 1,000 tons of ballast per hour into 60-car trains. In addition to ballast, the plant will produce a full range of AASHTO sizes, including washed material from 1 inch down.

The quarry itself is in well-stratified, undifferentiated Salina dolomite, which is underlain by the Tymochtee Dolomite. Stone in the 100-foot face is very low in LA abrasion loss (18 to 20 percent) and has a low soundness loss.

National has constructed barriers with plantings around the site, paved roads and parking lots, installed a baghouse and wet suppression system, and maintains a water truck and road sweeper. The plant office and plant entrance were constructed with stone quarried from the new plant.

Two PM10 air monitors on the property and two located in an adjacent county park monitor the ambient air for minus-10-micron particles. So far, no air quality problems have occurred, and the company expects more air quality problems from farmers combining their crops than from National's operations.

The flexibility of the plant system is the key to its operating efficiency. Any of the three major systems—primary, secondary, and tertiary—can be operated independently or as part of the overall system.

Donald Jolley, manager of northern aggregate operations, explains that the primary crusher, a 0.75-meter shear crusher, will be supplied by two front-end loaders from the muck pile. This crusher was selected because of its "shear" crushing characteristics, which allow the efficient sizing necessary for production of ballast-size material.

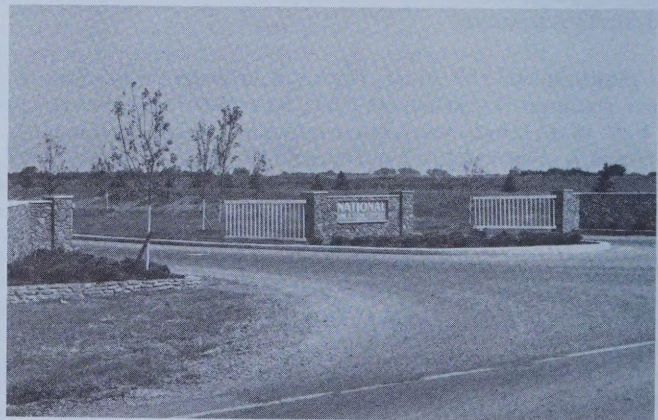
The crusher reduces the shot rock to minus 10 inches, discharging it to a radial stacking conveyor, which piles it over the primary surge pile. The surge pile has a live storage

capacity of 7,000 tons, and is constructed over a tunnel housing a draw-out conveyor that moves the stone to the secondary plant.



Environmental concerns and aesthetics weren't the only aspects that needed to be taken into consideration. One of the quarry's neighbors is literally right across the street from the main entrance and is a designated historic site.

The secondary plant consists of a screening tower housing an 8- x 20-foot triple-deck screen. Oversize rock from the screen is returned to the tower, where secondary crushing can be done by a cone crusher and/or an impact



The entrance was constructed from some of the first stone quarried, and landscaped to blend in with the surrounding area.

crusher. Finished product from the screen goes out through three stacking conveyors, one of which feeds the ballast-loading plant while another feeds the tertiary plant.

The rail ballast is also stacked over a tunnel housing a draw-out conveyor, which moves the stone to another 8- x 20-foot screen, where the material is washed before it is loaded into the rail cars.

The tertiary screening plant houses a third 8- x 20-foot screen, which produces four washed products. These products are also stocked by radial stacking conveyors.

Jolley noted that when the plant is complete, only three employees will be required to operate it—two in the load-and-carry operation to feed the primary crusher, and one operating the plant, controlling the system from the primary surge pile to final product storage. In customer service, one employee will be used to operate the ballast-loading system and one or two to operate front-end loaders.

National is also moving its Findlay ready-mixed concrete operation to the new quarry site. The 10-cubic-yard-batch plant is fully automated.

Palmer said the fully automated, state-of-the-art facility concept worked because the company has developed extensive in-house engineering and construction capabilities. "The whole project was planned, many of the systems fabricated and erected, and the entire construction supervised by our people," he explained. "Over the years we have built up a significant capability, and this team moves from project to project. Last year we developed a new plant in Lima. This year in Findlay. Next year in Delaware."

"The name of our game," he continued, "is product quality, service, and price. We have found technology is the answer and we have built a team to provide us with that technology."



Aerial view of National Lime & Stone Company's new Findlay Plant limestone quarry in Liberty Township, Hancock County.

THE U.S. GEOLOGICAL SURVEY'S NATIONAL COAL RESOURCES DATA SYSTEM IN OHIO: TEAMWORK FOR THE FUTURE OF OHIO COAL

by

Richard W. Carlton, Senior Geologist
Ohio Department of Natural Resources
Division of Geological Survey

INTRODUCTION

During the 20th century, Ohio has contributed significantly to the energy and industrial requirements of the United States through its coal production. However, since 1970, coal production has decreased dramatically in Ohio from approximately 55 million tons to around 33 million tons in 1989. This decline is a result primarily of the enactment of the federal Clean Air Act in 1970 and the New Source Performance Standards issued in 1979. New federal pollution-control laws passed in 1990 may destroy the market for Ohio's coal altogether unless clean-coal technologies can be developed quickly. Of all the coal-producing states, Ohio is affected the most by these laws. Because of the vagaries of nature millions of years ago, Ohio is one of the few coal-producing regions in the U.S. which has virtually no low-sulfur coals left to mine.

From these facts, one could assume the future of Ohio's coal industry is pretty bleak. Citizens might even conclude that the Division of Geological Survey's interest in coal-related projects would diminish. As far as the Survey is concerned, nothing could be further from the truth. Literally hundreds of investigators, not only in Ohio but nationwide, are searching for economical methods of removing sulfur from coal. The single most significant event aimed at improving Ohio's coal market was Ohio voters' approval of Issue 1 in 1985 authorizing the State of Ohio to grant up to \$100 million in bonds to support coal research and development to find technologies and methods that will make it possible to expand the use of high-sulfur coal. In the five years since the passage of Issue 1, significant progress has been made toward development of technologies for reducing SO₂ and NO_x emissions. One good example is the limestone-injection multistage burners (LIMB) and Coolside process technologies recently tested and demonstrated at Ohio Edison's Edgewater Power Station in Lorain, Ohio. Another example is the 70-MW pressurized-fluidized-bed combustion technology being installed at Ohio Power's Tidd Plant in Brilliant, Ohio. Considering these advances in technology, the instability of world oil prices, and the determination of Ohioans to solve the sulfur problem, the long-range prognostications for the marketability of Ohio's coal should be optimistic. Division of Geological Survey geologists do not take the pessimistic view that coal in Ohio no longer merits attention by the Survey. Even in the depressed market, coal in Ohio is nearly a billion dollar industry, having approximately twice the value of all other mineral commodities, including oil and gas, produced in Ohio. Ohio has an extremely large resource base of over 20 billion short tons of coal (Collins, 1976). Although nearly all of this coal is high in sulfur, Ohioans cannot afford to allow

such a large and valuable product to remain undeveloped. Therefore, Survey personnel will continue today and in the future to provide modern, up-to-date information on Ohio coals.

THE NATIONAL COAL RESOURCES DATA SYSTEM

Most coal research presently being performed at the Survey is focused on the National Coal Resources Data System (NCRDS) coordinated by the U.S. Geological Survey (USGS). The NCRDS program is a modern, state-of-the-art system that has the potential to provide valuable information to the coal industry over the next 10 years. While the Ohio coal market gradually regains its health as a result of the proliferation of modern coal-cleaning and scrubbing technologies, the Ohio sector of the NCRDS also will be growing and providing an increasingly complex and detailed data set for Ohio coal producers.

The NCRDS currently has cooperative agreements with 22 state geological surveys. Coal data are continually being collected and entered into the system, which presently has records on more than 150,000 geographically located observations across the nation, including measured-section and core-hole descriptions. NCRDS also has over 15,000 chemical analyses of coals from many coal seams nationwide. As stated in the NCRDS catalog (U.S. Geological Survey, no date),

The National Coal Resources Data System, NCRDS, was established to assess the quantity and quality of U.S. coal resources. The system was designed to be used as a reference and research tool as well as a way to provide consistent data to policy makers deciding upon the use of our coal resources. To accomplish these objectives, two distinct activities were required. First, the data concerning coal resources had to be gathered. This has been a continuous effort supported cooperatively by the U.S. Geological Survey and its many state counterparts throughout the coal-bearing regions of the U.S.

The second major activity was to develop an efficient computer system to utilize the data. The computer system includes the development of two major software subsystems to store and utilize the raw coal data. The first subsystem, whose acronym is PACER (Program to Analyze Coal Energy Resources), is designed to provide database structure to the data files. PACER enables the user to select, edit, and display the data as well as produce reports, charts, and statistical analyses. The second subsystem, whose acronym is GARNET (Graphic Analysis of Resources using Numerical Evaluation Techniques), can be used to create contour plots, to estimate coal tonnages for an area, and perform various related tasks.

During the past year the USGS has been updating the NCRDS computer system so that GARNET can run on powerful stand-alone workstations. This setup will allow users in various states to access the main database in Reston, Virginia, and select and download via a telecommunications link whatever information is required.

THE SURVEY'S ROLE IN THE NCRDS

The Division of Geological Survey has only recently become involved with the NCRDS. In 1989, Survey personnel entered stratigraphic data, including coal locations, thicknesses, and elevations, for 170 cores and 500 measured sections. More data are continually being added. In 1990, data for an additional 241 cores and 475 measured sections in Belmont County were added to the database in Reston. It is anticipated that by the end of 1991 the Division of Geological Survey will have a computer workstation devoted entirely to NCRDS-related work. This computer system will be linked directly to the main database in Reston and will enable the Survey to produce preliminary geologic maps and carry out statistical analyses and coal resource/reserve studies.

In the near future the Survey will produce coal-reserve evaluations similar to recent studies performed by West Virginia, Virginia, and Kentucky in cooperation with the Coal Availability Program of the USGS (Sergeant and others, 1989; West Virginia Geological and Economic Survey, 1990). In these studies such factors as land-use, cultural, legal, technological, and geological restrictions which limit mining development are taken into consideration when performing coal-reserve calculations. This method gives a far more realistic estimate of the actual amount of available coal in the ground that could some day be mined. The coal availability studies are best performed using a geographic information system (GIS) such as the National Coal Resources Data System (NCRDS).

A GIS is defined as an integration of computer software and hardware specifically designed for the acquisition, maintenance, and processing of spatial data (Tomlin, 1990). The accompanying diagram represents the concept of a computer-based GIS that the Survey will use in some of its preliminary work. Thus far, Survey personnel have entered point locations, coal elevations, surface elevations, and coal thicknesses for the Meigs Creek (No. 9), Pittsburgh (No. 8), Upper Freeport (No. 7), Lower Freeport (No. 6A), and Middle Kittanning (No. 6) coals in Belmont County. These data were collected from the Survey's extensive files of drill-hole and measured-section descriptions. Coal crop lines from the most recent geologic map of Belmont County (Berryhill, 1963) have been digitized for database entry. Extent of underground mined-out areas determined from the Survey's abandoned-underground-mine map series and extent of surface mines determined from topographic maps and other sources were digitized for the Bethesda 7.5-minute quadrangle and entered into the database in Reston. A modified version of the Ohio Department of Transportation's digitized base map for Belmont County also will be added to the computer files in Reston. Detailed coal resource and reserve calculations for the Bethesda quadrangle will be completed by the end of 1991 as part of Ohio's participation in the Coal Availability Program funded by the USGS.

The different types of data entered into the GIS in Reston are considered to be on single-factor maps called overlays. One overlay might contain the crop line for the Meigs Creek coal, a second overlay the surface-mined areas, and a third the Department of Transportation base map. Once all the

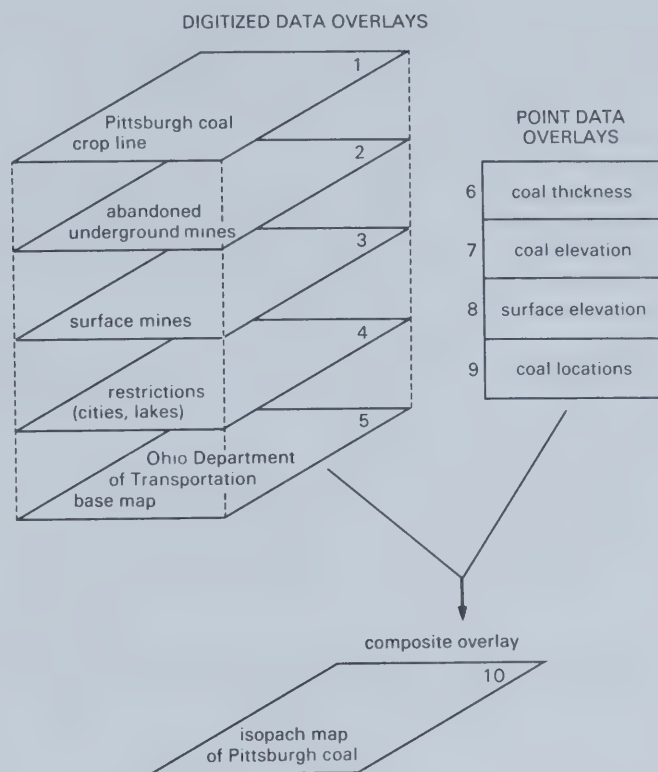
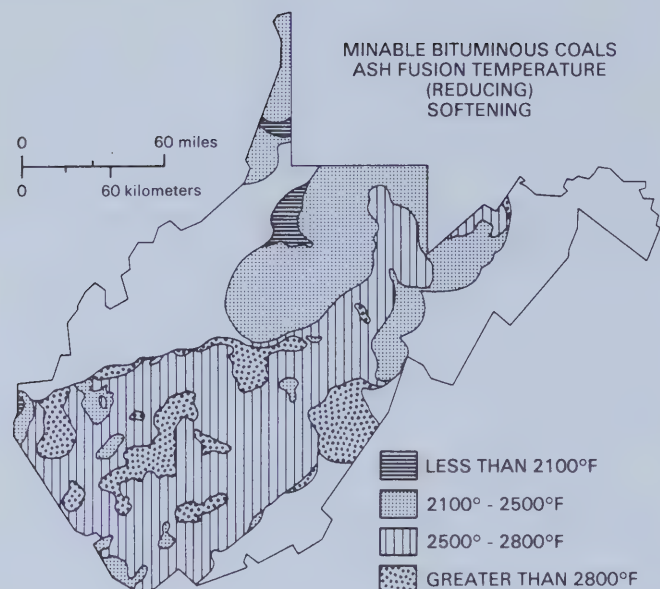


Diagram showing the types of overlays the Survey will use to produce computer-generated coal maps. Integrating overlays 1, 5, 6, and 9 would result in an isopach map of the Pittsburgh (No. 8) coal showing lines of equal coal thickness in a spatially located area (overlay 10). In the same manner, GARNET can produce numerous types of overlays. Other examples include overburden maps and coal resource maps with coal outcrop, reliability arcs, and isopach lines.

the information can be selectively retrieved and graphically transformed to generate new overlays. In the Survey's case, new overlays will include isopach (shows lines of equal coal thickness), structure (shows lines of equal coal elevation), and 100-foot-cover maps for each seam. Finally, GARNET will integrate the overlays in such a manner that resource maps and tonnages for each seam can be produced. GARNET and PACER are capable of producing other types of maps and analyses depending on the data available to the computer files in Reston.

In the future the Survey will have the capability of quickly generating regional maps and, if desired, detailed maps of sulfur or ash trends in Ohio coal seams. Many other coal parameters such as arsenic or chlorine content could be mapped showing areas of high, medium, or low concentrations of these elements in the coal. The map on page 6 shows the generalized distribution of ash fusion temperatures of all seams in our neighboring state of West Virginia. This map is useful for showing ash fusion "trends" across the state.

Ohio, with its enormous reserves of coal, has long been a leading coal producer in the U.S. But, because of the economic conditions and environmental concerns over the last 20 years, coal production in Ohio has been in a long, slow decline. Recently, engineering and scientific advances related to burning high-sulfur coal have been made that may shortly reverse this trend. When this reversal occurs, the Division of Geological Survey will already be providing



Map showing ash fusion temperature of West Virginia coals (modified from Smith and others, 1986). The Ohio Survey will be able to provide this type of information readily in the near future as its NCRDS files are completed.

modern maps, reserve estimates, and other coal data that are necessary for the successful recovery of this industry in Ohio.

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OHIO'S MINERAL INDUSTRIES TEACHERS WORKSHOP: A POSITIVE APPROACH TO A POSITIVE IMAGE

by

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What minerals are mined in Ohio? What benefits are derived from mining these resources? Can the mined land be returned to an environmentally useable form? These and many more questions on Ohio's mineral resources and mining industries are answered during the annual Ohio's Mineral Industries Teachers Workshop conducted each summer by the Ohio Department of Natural Resources, Division of Geological Survey and the University of Akron. Elementary through high school science teachers earn two graduate credit hours by attending the week-long workshop at the ODNR Fountain Square complex in Columbus. Grants from various trade associations and geological- and mining-oriented organizations pay for field-trip expenses and educational materials.

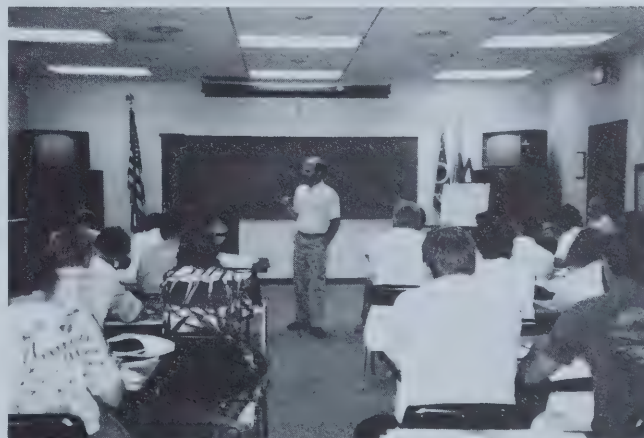
The workshop familiarizes the teachers with Ohio geology, the importance of Ohio's fuel and nonfuel mineral industries, and how environmental protection can be compatible with mining. Eleven fuel and nonfuel mineral resources are produced in Ohio: coal, oil, gas, limestone/dolomite, sand/gravel, sandstone/conglomerate, clay, shale, gypsum, salt, and peat. Many Ohioans are unaware of what mineral resources are produced in the state, how these mineral commodities are used daily, or how important these resources are to the economy of Ohio. The economic value of Ohio's raw mineral commodities in 1989 totalled over \$1.9 billion. The total value of the manufactured products from these mineral commodities far exceeds this number. Employment in Ohio's mineral industries, excluding oil and gas, totalled over 37,000 people in 1989; total wages exceeded \$1 billion. Most of this money is recycled into Ohio's economy. However, many Ohioans are not aware of the great importance of a healthy mining industry. All too often our citizens hear only that the environment is being destroyed by mining companies.

We need to educate the people of Ohio about the necessary balance between environmental concern and the need for mining. Showing science teachers that mining, reclamation, and subsequent environmentally sound land use do occur can make a difference in the future. Teachers deal daily with young people who will be in control of the future. These young people must be knowledgeable in subjects affecting the Earth, such as earth science, geology, biology, and chemistry. By educating the teachers, our future decision-makers are being educated. The workshop presents practical information to teachers on all aspects of Ohio geology, mining, and reclamation from experienced, well-informed professionals. If 25 teachers attend the workshop each year, and each teacher communicates what he/she has learned to 100 students per year, then 2,500 students are learning about the compatibility between

mining and the environment in just one year. During a 20-year period, 50,000 future decision-makers will be reached.

The fourth Ohio's Mineral Industries Teachers Workshop was conducted July 9-13, 1990. Grants from the Ohio Aggregates Association, the Ohio Mining and Reclamation Association, the Ohio Oil and Gas Association, the Northern Ohio Geological Society, and the Ohio Chapter of Women in Mining made the workshop possible by paying for field-trip costs and most educational materials. Twenty-three elementary through high school science teachers heard two days of presentations by experienced professionals from research (ODNR, Divisions of Geological Survey and Water), academia (University of Akron), and state and federal regulatory agencies (ODNR, Divisions of Oil and Gas and Reclamation and U.S. Bureau of Mines). The presentations included a variety of information on the economics, regulations, uses, and geologic origin of Ohio's mineral resources. At the mining operations visited during the field trips, industry professionals from individual mining companies and the Ohio Aggregates Association made presentations on the mechanics, economics, regulations, and environmental concerns associated with mining specific mineral commodities.

Three days of field trips gave the teachers a firsthand look at the operations of various mineral industries. The



Participants in the 1990 Ohio's Mineral Industries Teachers Workshop learn about glacial geology from Survey geologist Scott Brockman at the ODNR Assembly Center at Fountain Square in Columbus.



Buckeye Furnace State Memorial in Jackson County illustrated the striking contrast between past and present mining practices.

first field trip covered central and southeastern Ohio and included an overnight stay at Burr Oak State Park Lodge in Morgan County. The teachers visited Waterloo Coal Co., Inc., in Jackson County, where they viewed coal strip mining, limestone and clay mining, and reclamation activities. Lunch was provided by Waterloo Coal Co., Inc. Afternoon activities included a visit to the Ohio Historical Society's Buckeye Furnace State Memorial, a reconstructed charcoal-iron furnace that operated in the 1800's in Jackson County. A stop at an abandoned coal-mine site to view acid-mine drainage clearly demonstrated the need for reclamation procedures. The last activity of the first day was a tour of the Southern Ohio Coal Co. (American Electric Power Co.) coal-preparation plant in Meigs County—one of the largest coal-preparation plants in North America.

On the second day of the first field trip the teachers met with a geologist from W. E. Shrider Co., an oil and gas firm, at a working oil and gas well and holding tanks in Perry County.



In Perry County, a geologist from W. E. Shrider Co. informed the teachers of the mechanics of oil and gas production and the industry's economic and environmental concerns.

County. The teachers learned the mechanics of drilling for oil and gas along with the regulations associated with this drilling, the economics of the industry, and environmental concerns. The group then toured the Central Silica Co. sandstone quarry, reclamation operation, new quarry site, and glass-sand processing plant in Perry County. Lunch was provided by Central Silica Co. The day ended with a tour of the brick plant, shale stock pile, and brick artwork of Bowerston Shale Co. in Licking County.

The second field trip was in central and southwestern Ohio. The teachers were scheduled to tour a limestone quarry and sand and gravel pit of American Aggregates Corp. and visit one of their reclaimed sites in Franklin County. Workshop participants were also scheduled to visit the Anderson Concrete Corp. portland-cement-concrete mixing plant and the Bituminous Concrete Corp. asphaltic-concrete mixing plant in Franklin County. However, for the first time in four years, heavy rains made tours of the sand and gravel pit and the asphaltic-concrete mixing plant impossible. The last stop of the day was at Caesar Creek State Park, in Warren County, where the teachers were given a presentation on earth science educational tools by the U.S. Army, Corps of Engineers before they collected Ordovician-age fossils on the emergency spillway of the Caesar Creek Lake Dam.



Teachers brave the elements to search for fossils at the American Aggregates Corp. Columbus Limestone quarry in Franklin County.

The intent of the workshop is to open the eyes of the teachers, and therefore their students, to the economic need for Ohio's mineral resources and the environmentally responsible way these resources are being extracted in Ohio. All citizens rely on the science of geology and consume mineral resources daily. Mining is a necessary human activity. The land being mined can be reclaimed to be compatible with farming, grazing, commercial and residential development, or recreation. Each year workshop participants see many examples of mining and subsequent reclamation. The overwhelming interest, enthusiasm, and positive comments expressed by the teachers indicate that the effort put forth by all involved is successful. A positive image for Ohio's mining industry is possible, and the Ohio's Mineral Industries Teachers Workshop helps promote this image.

1989 OHIO MINING ACTIVITIES IN BRIEF

Reports were filed in 1989 for 449 coal-mining operations, of which 255 reported coal production. Reports also were filed for 50 coal-washing plants and associated facilities. Of 525 industrial-mineral-mining operations known to be operating in 1989, 454 operations were active. There were 12 mines reporting production of coal and one or more industrial minerals and 26 mines reporting production of multiple industrial minerals (including those mines producing coal and industrial minerals). There were 1,099 new wells completed for oil and gas in 1989, of which 966 were productive and 133 were dry.

The total value² of coal was \$971,352,479 in 1989; the value of oil and gas was \$592,752,959; and the total value² of all nonfuel industrial minerals was \$392,206,835 in 1989.

²Includes reported and estimated values. Some operations reporting sales did not report a value for those sales. A statewide average price per ton was calculated for each industrial mineral commodity based on sales for which the value was reported. A countywide average price per ton was calculated for coal based on sales for which the value was reported and method of production. These calculated averages were used to estimate the value of the sales for which the actual values were not reported.

TABLE 1.—1989 Mineral sales and production in Ohio

Commodity	Production ¹	Sales ²
Coal	31,431,757 tons	31,721,465 tons
Limestone and dolomite	48,823,737 tons	47,694,253 tons
Sand and gravel	42,450,090 tons	41,019,770 tons
Salt	4,244,657 tons	4,277,846 tons
Sandstone and conglomerate	1,973,393 tons	1,794,444 tons
Clay	1,526,576 tons	1,508,443 tons
Shale	1,934,297 tons	1,922,528 tons
Gypsum	237,039 tons	237,039 tons
Peat	23,660 tons	34,308 tons
Gas	159,729,510 MCF ³	4
Oil	10,218,674 barrels	4

¹The production figures for the industrial minerals are estimates. Many operators do not know actual production. Some operators report estimates, other operators do not report any production. For those operators who do not report production, production is assumed to equal sales.

²Includes material for captive use.

³Thousand cubic feet.

⁴Figure not available.

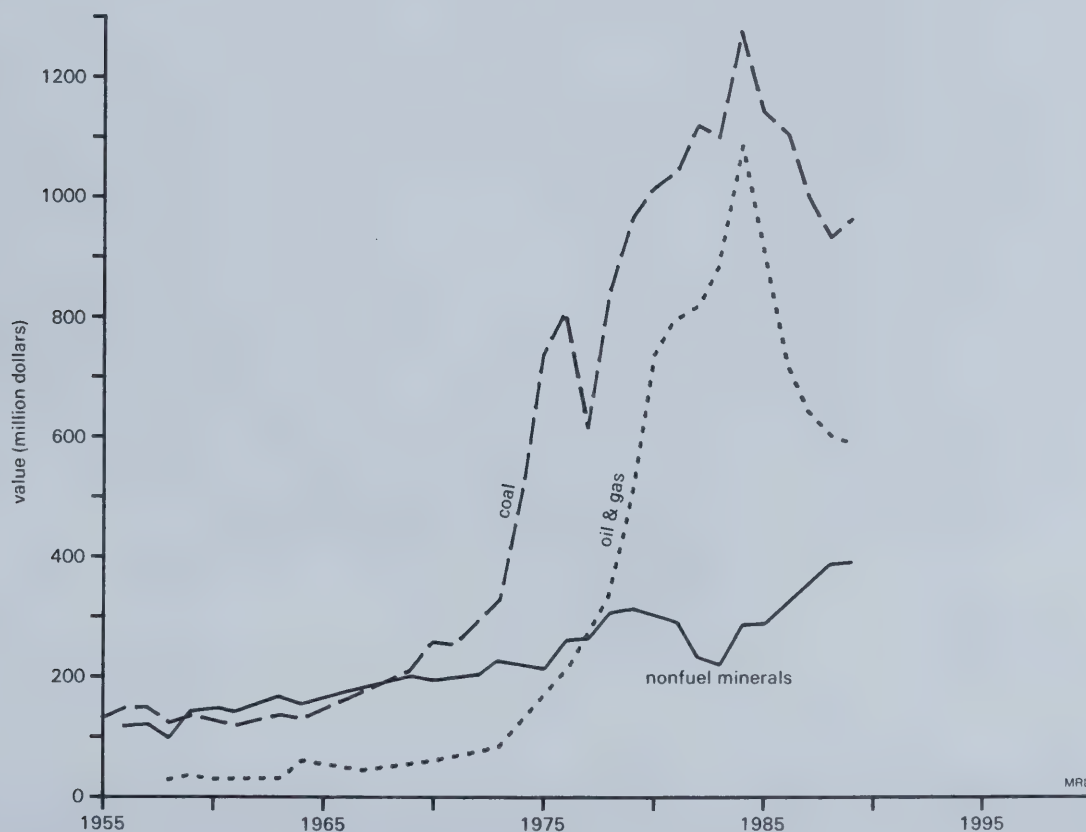


FIGURE 1.—Value of coal, nonfuel minerals, and oil and gas in Ohio.

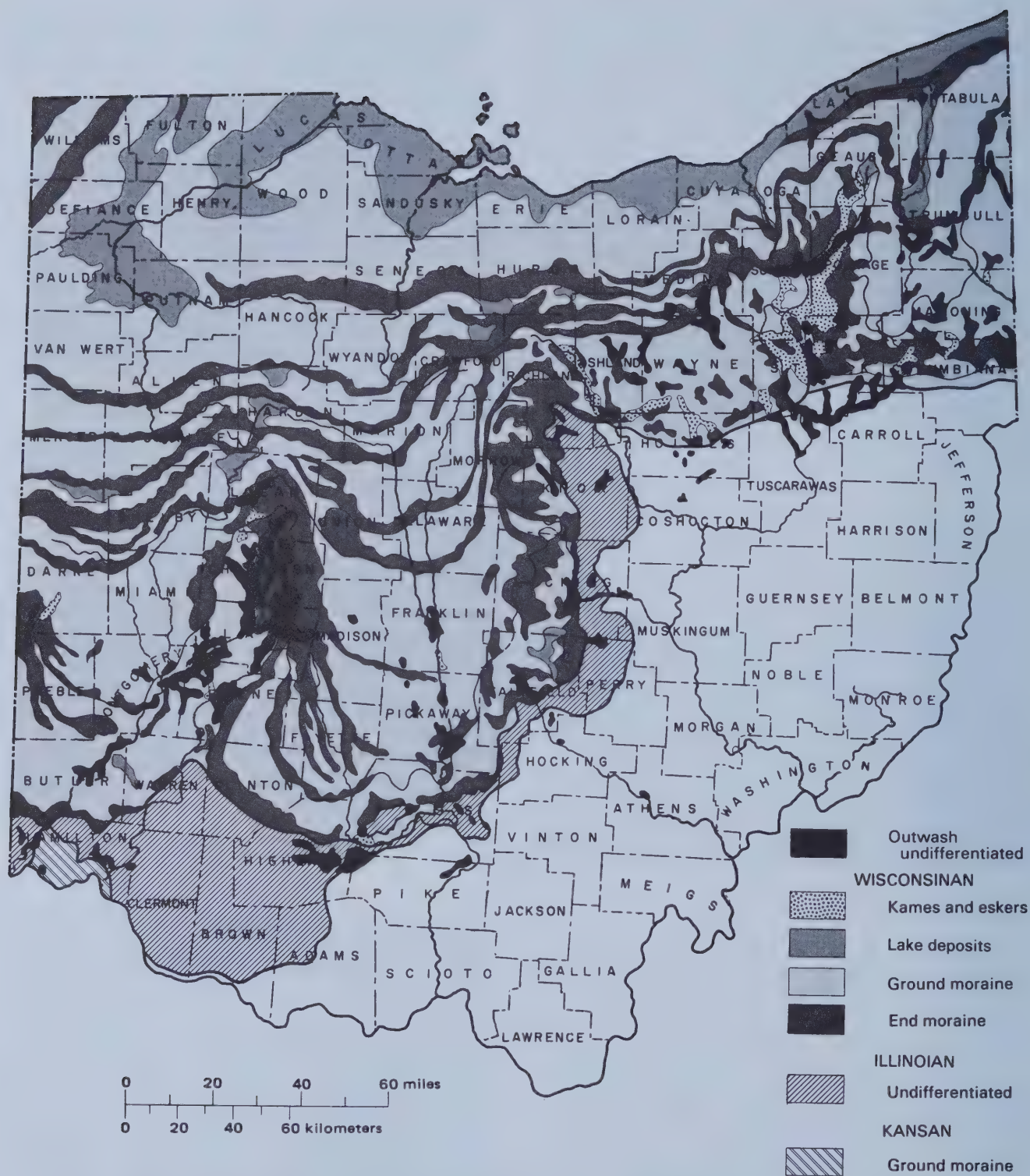


FIGURE 2.—Generalized map of the glacial deposits of Ohio. Continental glaciers advanced over the Ohio landscape several times during the Ice Age. These glaciers deposited unconsolidated materials on top of the bedrock over nearly two-thirds of the state. Most of Ohio's sand and gravel production comes from kames, eskers, and outwash, which were deposited by meltwater from the glaciers. Other glacially derived industrial minerals in Ohio include peat and clay.

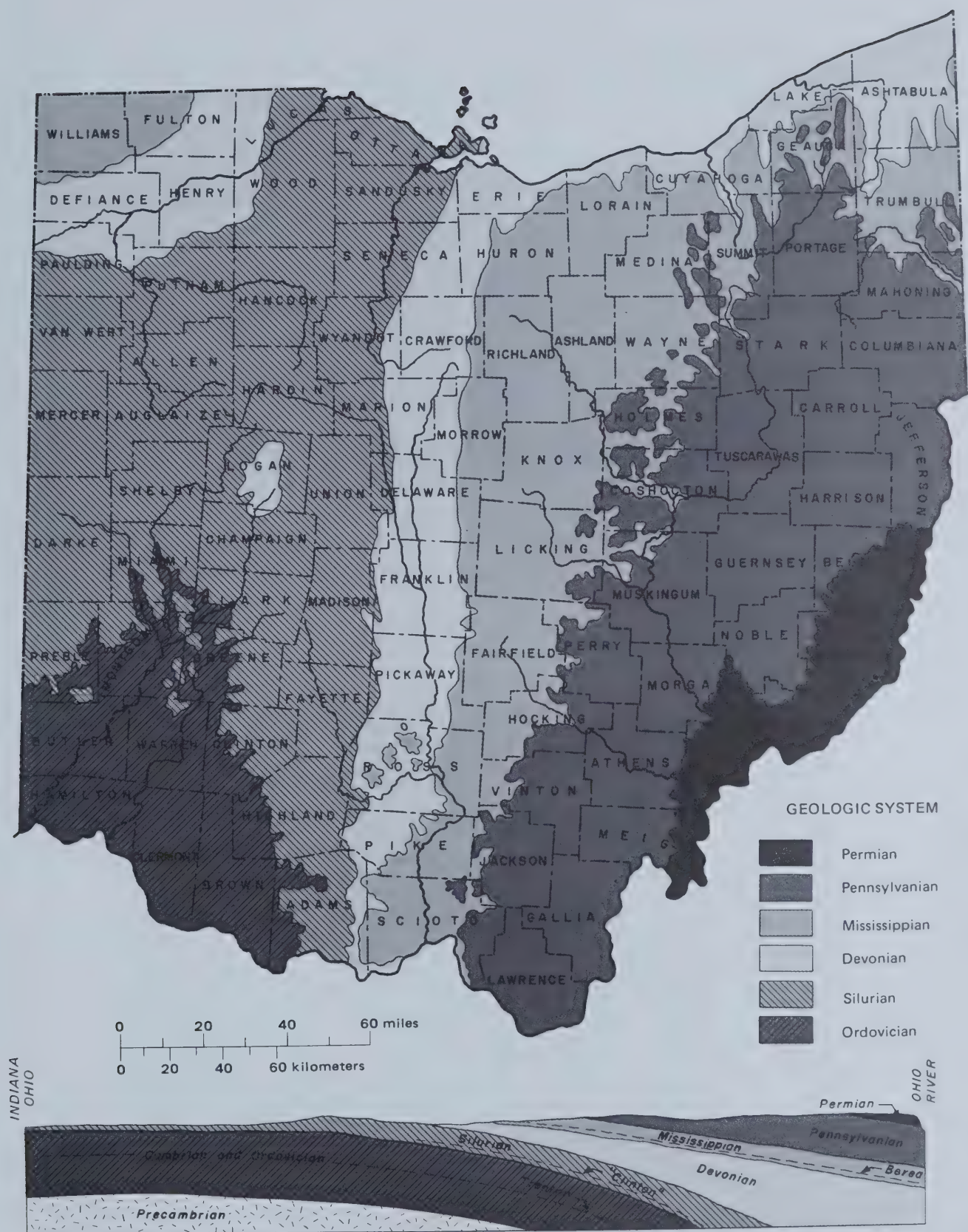
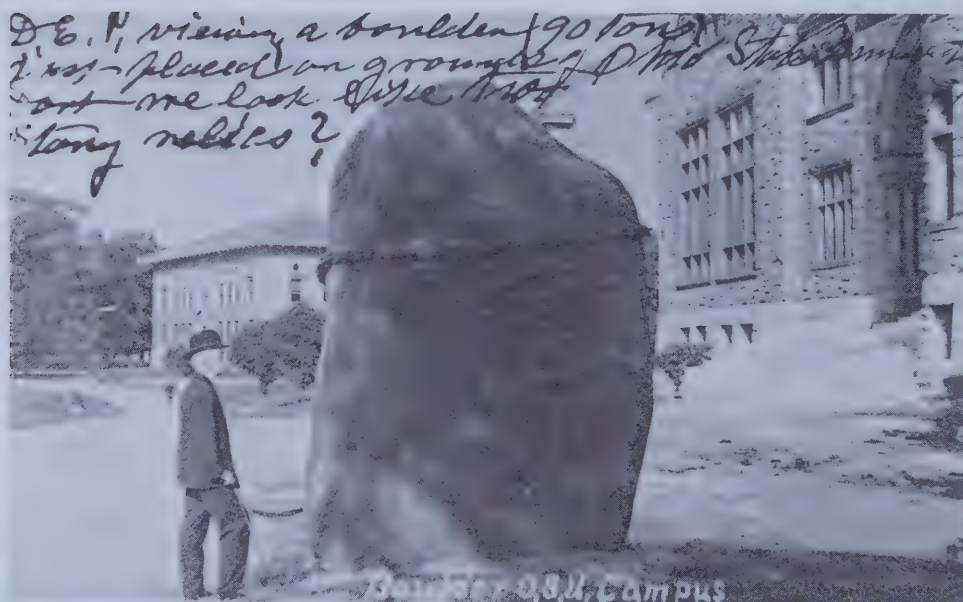


FIGURE 3.—Generalized geologic map and cross section of Ohio. Mineral production occurs throughout Ohio and from every geologic system from the Cambrian to the Permian. Coal, limestone and dolomite, sandstone and conglomerate, shale, clay, gypsum, salt, and oil and gas are produced from Ohio bedrock.



Sluice for a gold mine along Deadman's Run near Bellville, Richland County, *circa* 1905. Photo from a postcard postmarked 1908 in the collection of David A. Stith.



Boulder that had just been placed (note chain) outside Orton Hall on the campus of The Ohio State University. Photo from a postcard postmarked 1906 in the collection of David A. Stith.

COAL

Coal was produced by 103 companies at 255 mines in 23 Ohio counties during 1989. Production increased 0.9 percent from 1988, totalling 31,431,757 tons in 1989, with 20,598,932 tons (65.5 percent of total production) produced at 242 surface mines, and 10,832,825 tons (34.5 percent of total production) produced at 13 underground mines. Ohio is the ninth-largest coal-producing state in the nation and ranks second nationally in coal consumption.³ In comparison to 1988, there were 24 fewer mines reporting production of 50,000 tons or less, 4 fewer mines producing between 50,000 and 500,000 tons, 3 fewer mines producing between 500,000 and 1,000,000 tons, and 1 more mine reporting production of 1,000,000 tons or greater; there was a net decrease of 30 mines in 1989.

The five leading counties for 1989 production were Belmont, Meigs, Noble, Harrison, and Vinton Counties; these counties produced 52.9 percent of the 1989 total production. A total of 31,721,465 tons of coal were sold in 1989, with a total value⁴ of \$971,352,479. The average price per ton of all coal sold was \$30.62; surface-mined coal averaged \$28.12 per ton and underground-mined coal averaged \$35.43.

In underground mining, 56.4 percent of the coal was mined by continuous miner and 43.6 percent was produced

by longwall mining; no coal was produced by conventional mining in Ohio in 1989. In surface operations, 4.5 percent of the coal produced was auger mined, and 95.5 percent was strip mined.

The Pittsburgh (No. 8) coal was the most heavily mined seam, followed by the Meigs Creek (No. 9), Clarion (No. 4A), Middle Kittanning (No. 6), and Lower Kittanning (No. 5) seams. Coal produced from these five seams made up 80.3 percent of the total 1989 production.

A total of 21,260,594 tons of washed coal were reported in 1989. Reports from 24 coal-washing plants indicate an average 32.1 percent loss in washing.

Trucking was the primary means of coal disposition, carrying 51.9 percent of the total sales. Conveyor belts carried 24.0 percent, water transport carried 17.3 percent, and rail transported 6.8 percent of the coal sold in 1989; less than 0.1 percent was handled by other undesignated means. A total of 0.9 percent of the coal produced was reported as stored.

The total average annual employment reported in 1989 was 6,522 employees, 4,005 of whom were production employees. The average annual wage earned by all production employees was \$35,134, based on those employees for whom wages were reported. The average annual wage for surface-mine production employees was \$32,576, and the average annual wage for underground-mine production employees was \$38,439. Wages earned by all employees totalled \$236,724,903 in 1989.

³Information from U.S. Department of Energy, Energy Information Administration.

⁴Includes reported and estimated values. See footnote 2, p. 9.



FIGURE 4.—Coal sales in Ohio in 1989, by county.

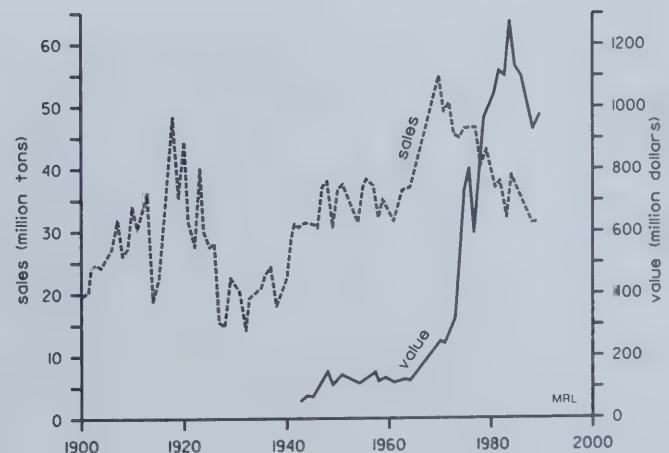


FIGURE 5.—Sales and value of coal in Ohio.

1989 OHIO MINERAL INDUSTRIES REPORT

TABLE 2.—1989 Ohio coal production by production-size group and change from 1988

Production-size group	1989		Change from 1988 (short tons)
	Number of mines reporting	Production (short tons)	
Under 25,000 tons	102	1,156,064	-307,255
25,000 to 49,999 tons	47	1,659,034	+105,040
50,000 to 99,999 tons	42	3,044,564	-524,907
100,000 to 249,999 tons	39	6,234,002	+655,032
250,000 to 499,999 tons	16	5,604,904	+1,913,916
500,000 to 999,999 tons	4	2,652,159	-2,596,788
1,000,000 tons and over	5	11,081,030	+1,022,716
TOTAL	255	31,431,757	+267,754

TABLE 3.—1989 Ohio coal production by county and mining method

County ¹	All methods (short tons)	Underground					Surface			
		Number of mines reporting	Production (short tons)				Number of mines reporting	Production (short tons)		
			Total	Longwall	Conventional	Continuous miner		Total	Strip	Auger
Athens	151,021						1	151,021	151,021	
Belmont	4,963,841	2 ²	2,266,818	165,937		2,100,881	43	2,697,023	2,352,743	344,280
Carroll	793,097						16	793,097	762,454	30,643
Columbiana	1,222,322	3	607,794			607,794	17	614,528	498,850	115,678
Coshocton	1,891,950						12 ²	1,891,950	1,865,094	26,856
Guernsey	139,065						3	139,065	133,858	5,207
Harrison	2,387,099	1	321,874	321,874			16	2,065,225	2,050,349	14,876
Hocking	126,965						5	126,965	126,965	
Holmes	452,349						7	452,349	452,349	
Jackson	1,028,866	1	36,017			36,017	10	992,849	992,849	
Jefferson	1,915,949						20 ²	1,915,949	1,891,487	24,462
Lawrence	26,532						2	26,532	26,532	
Mahoning	198,159						2	198,159	185,974	12,185
Meigs	3,734,156	2	3,734,156	2,458,210		1,275,946				
Monroe	1,980,914	1	1,980,914	1,640,067		340,847				
Muskingum	932,882	1	32,562			32,562	4 ²	900,320	828,597	71,723
Noble	3,352,038						9	3,352,038	3,285,524	66,514
Perry	1,536,156	1	1,128,597			1,128,597	3	407,559	407,559	
Stark	195,720						8	195,720	192,415	3,305
Tuscarawas	2,104,535						46	2,104,535	1,892,799	211,736
Vinton	2,200,849	1	724,093	141,382		582,711	17 ²	1,476,756	1,476,756	
Washington	65,382						1 ²	65,382	65,382	
Wayne	31,910						1 ³	31,910	31,910	
TOTAL	31,431,757	13	10,832,825	4,727,470	0	6,105,355	242	20,598,932	19,671,467	927,465

¹Production from mines operating in more than one county was evenly split between the counties involved unless a by-county breakdown was provided by the operator.²Does not include mines extending into this county from adjoining counties.³This mine extends into Wayne County from Holmes County and is not included in the total number of mines.

TABLE 4.—1989 Ohio coal production by county and month

County ¹	Production (short tons)												
	Total annual	January	February	March	April	May	June	July	August	September	October	November	December
Athens	151,021	13,219	10,814	12,977	11,258	3,307	7,274	16,186	16,233	17,968	16,764	14,668	10,353
Belmont	4,963,841	420,731	452,683	478,406	397,169	406,559	390,112	370,856	519,213	466,341	450,109	327,838	283,824
Carroll	793,097	18,820	21,273	29,845	86,753	84,723	89,402	85,740	95,510	91,315	59,619	67,139	62,958
Columbiana	1,222,322	95,541	80,194	101,992	96,237	115,561	97,977	87,925	112,277	131,612	107,164	98,780	97,062
Coshocton	1,891,950	153,972	160,152	154,411	134,663	141,965	129,806	147,407	189,489	178,887	188,035	155,668	157,495
Guernsey	139,065	6,353	6,376	6,079	3,118	4,913	6,869	9,677	24,785	24,767	16,264	19,277	10,587
Harrison	2,387,099	196,812	202,273	215,597	246,404	229,852	140,809	148,250	246,195	220,279	238,180	157,997	144,451
Hocking	126,965	9,941	9,444	9,239	10,130	12,698	12,715	11,689	11,898	14,570	7,600	8,186	8,855
Holmes	452,349	52,317	40,119	31,865	37,842	37,393	36,278	36,300	38,264	36,898	31,794	34,890	38,389
Jackson	1,028,866	122,511	118,762	116,887	41,574	35,717	34,577	81,534	91,677	67,052	92,246	105,517	120,812
Jefferson	1,915,949	152,490	151,292	157,501	164,679	156,823	150,332	159,784	177,013	176,279	160,956	158,285	150,515
Lawrence	26,532	2,144	0	7,651	0	0	0	7,012	4,384	5,341	0	0	0
Mahoning	198,159	15,972	15,187	20,444	18,377	9,257	17,148	12,089	15,270	15,068	18,660	21,542	19,145
Meigs	3,734,156	416,388	387,352	453,886	342,845	329,807	153,771	81,749	384,740	261,061	275,554	338,892	308,111
Monroe	1,980,914	182,876	274,916	232,971	153,540	141,339	93,592	14,236	134,826	159,311	167,299	214,271	211,737
Muskingum	932,882	66,803	56,737	40,061	19,760	49,603	79,545	52,969	158,426	141,235	98,335	77,376	92,032
Noble	3,352,038	312,358	256,403	326,144	305,461	248,947	189,527	327,272	288,384	280,828	306,042	285,197	225,475
Perry	1,536,156	125,021	114,210	123,336	117,878	145,337	88,042	59,941	172,049	145,577	145,719	154,929	144,117
Stark	195,720	10,458	10,485	10,288	23,528	20,924	22,216	24,369	26,020	21,236	8,930	8,024	9,242
Tuscarawas	2,104,535	186,599	158,312	169,515	168,689	172,369	152,529	174,943	198,565	165,393	170,805	185,520	201,296
Vinton	2,200,849	194,900	188,624	244,349	190,534	203,934	173,557	117,072	171,849	158,763	192,437	202,494	162,336
Washington	65,382	9,152	11,724	5,531	8,625	4,879	5,183	507	469	811	5,653	5,759	7,089
Wayne	31,910	1,711	697	1,039	1,474	4,325	3,137	1,760	5,043	4,923	1,280	3,268	3,253
TOTAL	31,431,757	2,767,089	2,728,029	2,950,014	2,580,538	2,560,232	2,074,398	2,029,267	3,082,579	2,785,515	2,759,445	2,645,517	2,469,134

¹Production from mines operating in more than one county was evenly split between the counties involved unless a by-county breakdown was provided by the operator.



Mine opening in the Upper Freeport (No. 7, or "Big Vein") coal at Salineville, Columbiana County. Photo *circa* 1910.

TABLE 5.—1989 Ohio coal production

County ¹	Production									
	Total	Sharon (No. 1)	Lower Mercer (No. 3)	Upper Mercer (No. 3A)	Brookville (No. 4)	Winters	Clarion (No. 4A)	Lower Kittanning (No. 5)	Strasburg (No. 5A)	Middle Kittanning (No. 6)
Athens	151,021									75,509
Belmont	4,963,841									
Carroll	793,097							202,951		309,921
Columbiana	1,222,322				65,136			31,221		174,966
Coshocton	1,891,950							940,487	112,909	820,311
Guernsey	139,065									
Harrison	2,387,099							2,530		51,435
Hocking	126,965						8,936	219,836		160,363
Holmes	452,349				41,409					
Jackson	1,028,866	81,634			133,359		192,524	583,462		27,573
Jefferson	1,915,949									
Lawrence	26,532						2,144	24,388		
Mahoning	198,159				189,987			8,172		
Meigs	3,734,156						3,734,156			
Monroe	1,980,914									
Muskingum	932,882							3,271		131,979
Noble	3,352,038									
Perry	1,536,156							34,288		1,419,547
Stark	195,720				93,108			52,138	252	50,222
Tuscarawas	2,104,535			150,073	106,269			401,492	21,412	756,515
Vinton	2,200,849		135,336	30,453	506,215	166,630	896,228	413,519		47,261
Washington	65,382									
Wayne	31,910				31,910					
TOTAL	31,431,757	81,634	135,336	180,526	1,167,393	166,630	4,833,988	2,917,755	134,573	4,025,602

¹Production from mines operating in more than one county was evenly split between the counties involved unless a by-county breakdown was provided by the



Coal outcrop in an abandoned strip mine in NE¼ sec. 30, York Township, Athens County. Photo taken in 1957.

by county and seam

(short tons)										
Lower Freeport (No. 6A)	Upper Freeport (No. 7)	Mahoning (No. 7A)	Anderson	Harlem	Pittsburgh (No. 8)	Pomeroy-Redstone (No. 8A)	Meigs Creek (No. 9)	Uniontown (No. 10)	Waynesburg (No. 11)	Washington (No. 12)
75,512	3,029	98,257		144,564	2,767,465	24	876,114	2,109	1,074,051	241,049
7,179	30,225				72,315					
618,983	259,701				26					
	18,217				14,630					
	124,435				1,438,760	253,390	500,751			
57,694	37,356									
21,805	15,306				1,604,182	300,218	5,570		5,979	
	10,314				1,980,914					
19,238	63,083		17,780				779,852			
			7,500				3,344,538			
2,862	665,887				25					
5,207							65,382			
808,480	1,227,553	98,257	25,280	301,406	7,878,317	553,632	5,572,207	2,109	1,080,030	241,049

operator.



Division of Geological Survey geologists (H. R. Collins, left; G. Botoman, right) measuring a coal seam in a strip mine in eastern Ohio. Photo taken in the late 1970's.

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TABLE 6.—1989 Disposition of Ohio coal, by county

County ¹	Number of mines	Disposition ¹ (short tons)						Stored
		Total ²	Rail	Water	Truck	Conveyor	Unspecified/ other	
Athens	1	151,021			151,021			
Belmont	45 ³	5,091,026	1,491,916	1,509,850	2,089,260			75,933
Carroll	16	793,097		10,236	779,001	3,860		
Columbiana	20	1,223,200			1,223,200			1,628
Coshocton	12 ³	1,995,482		137,535	1,341,523	516,424		8,700
Guernsey	4	141,374		10,041	129,024	2,309		
Harrison	17	2,397,188		946,320	1,450,868			4,329
Hocking	5	126,965		63,138	63,827			
Holmes	7	452,349		8,044	444,305			
Jackson	11	1,028,866		45,752	983,114			
Jefferson	20 ³	1,920,237		335,869	1,584,368			7,508
Lawrence	2	26,532		1,708	24,824			
Mahoning	2	207,606			207,606			6,546
Meigs	2	3,665,806	7,786			3,658,020		85,224
Monroe	1	1,980,914		1,980,914				
Muskingum	5 ³	930,882		7,328	364,156	559,398		
Noble	9	3,361,194		186,799	1,251,696	1,922,696	3	1,140
Perry	4	1,640,484	60,319		805,839	774,326		26,800
Stark	8	194,061			194,061			1,659
Tuscarawas	46	2,107,883	61,921	85,197	1,960,765			37,982
Vinton	18 ³	2,188,005	523,605	138,691	1,338,065	187,644		11,931
Washington	1 ³	65,383			65,383			
Wayne	1 ⁴	31,910		8,936	22,974			
TOTAL	256	31,721,465	2,145,547	5,476,358	16,474,880	7,624,677	3	269,380

¹Tonnage of coal shipped from mines operating in more than one county was evenly split between the counties involved and type(s) of disposition reported unless a by-county breakdown was provided by the operator.

²Does not reflect tonnage stored. Reflects tonnage sold and shipped from mine.

³Does not include mines extending into this county from adjoining counties.

⁴This mine extends into Wayne County from Holmes County and is not included in the total number of mines.

TABLE 7.—1989 Rail shipments of Ohio coal, by county of origin and carrier

County ¹	Number of mines	Shipments ¹ (short tons)				
		Total	Conrail	B & O	N & W	C & O
Belmont	2	1,491,916	1,172,103		319,813	
Meigs	1	7,786				7,786
Perry	1	60,319	60,319			
Tuscarawas	3	61,921			58,393	3,528
Vinton	1	523,605				523,605
TOTAL	8	2,145,547	1,232,422	0	378,206	534,919

¹Tonnage of coal shipped from mines operating in more than one county was evenly split between the counties involved and the carriers reported unless a by-county breakdown was provided by the operator.

TABLE 8.—1989 Washed Ohio coal

		Raw coal (short tons)	Washed coal (short tons)	Loss in washing (short tons)	Loss in washing (percent)	Percent of all washed coals
By type of mining	From surface mines	12,769,211 ¹	10,581,904 ¹	2,187,307	17.1	49.8
	From underground mines	18,520,718 ¹	10,678,690 ¹	7,842,028	42.3	50.2
	TOTAL	31,289,929	21,260,594 ²	10,029,335	32.1	100.0
By seam	Lower Mercer (No. 3A)	80,255	64,203	16,052	20.0	0.3
	Brookville (No. 4)	119,784 ¹	107,806 ¹	11,978	10.0	0.5
	Winters	188,763	140,863	47,900	25.4	0.7
	Clarion (No. 4A)	8,737,364	4,725,005	4,012,359	45.9	22.2
	Lower Kittanning (No. 5)	697,367 ¹	545,991 ¹	151,376	20.0	2.6
	Middle Kittanning (No. 6)	2,341,796	1,463,628	878,168	37.5	6.9
	Lower Freeport (No. 6A)	621	434	187	30.1	<0.1
	Upper Freeport (No. 7)	262,006	205,659 ¹	56,347	21.5	1.0
	Harlem	22,319	17,884	4,435	19.9	0.1
	Pittsburgh (No. 8)	8,815,080 ¹	5,484,985 ¹	3,330,095	37.8	25.8
	Pomeroy-Redstone (No. 8A)	231,581	187,144	44,437	19.2	0.9
	Meigs Creek (No. 9)	4,794,201 ¹	4,219,717	574,484	12.0	19.8
	Waynesburg (No. 11)	1,200,887 ¹	969,365	231,522	19.3	4.5
	Washington (No. 12)	181,573 ¹	146,386	35,187	19.4	0.7
	Other ³	3,616,332 ¹	2,981,524	634,808	17.6	14.0
TOTAL		31,289,929	21,260,594 ²	10,029,335	32.1	100.0

¹The raw tonnage (before washing) and/or the clean tonnage (after washing) of coal was estimated for those mines which failed to report this information. These estimates were calculated using a statewide-average loss-in-washing percentage based on raw/washed coal values for type of mining and for seam deemed to be reliable.

²These figures reflect total washed coal in 1989 and do not necessarily reflect only 1989 production. In 1989, 41.2% of the total production was reported as unwashed. Coal not designated as washed or unwashed was assumed to be unwashed.

³Unspecified tonnages of seams listed above.

TABLE 9.—1989 Dollar value of coal at mine by county and mining method

County ¹	Surface				Underground				Total			
	No. of mines	Tonnage sold (short tons)	Value at mine ² (dollars)	Per ton average (dollars)	No. of mines	Tonnage sold (short tons)	Value at mine ² (dollars)	Per ton average (dollars)	No. of mines	Tonnage sold (short tons)	Value at mine ² (dollars)	Per ton average (dollars)
Athens	1	151,021	\$4,246,711	\$28.12					1	151,021	\$4,246,711	\$28.12
Belmont	43	2,740,862	88,640,897	32.34	2 ³	2,350,164	\$60,409,020	\$25.70	45 ³	5,091,026	149,049,917	29.28
Carroll	16	793,097	14,867,425	18.75					16	793,097	14,867,425	18.75
Columbiana	17	615,406	13,810,608	22.44	3	607,794	8,608,048	14.16	20	1,223,200	22,418,656	18.33
Coshocton	12 ³	1,995,482	64,325,522	32.24					12 ³	1,995,482	64,325,522	32.24
Guernsey	4	141,374	4,933,935	34.90					4	141,374	4,933,935	34.90
Harrison	16	2,075,314	66,920,021	32.25	1	321,874	7,830,486	24.33	17	2,397,188	74,750,507	31.18
Hocking	5	126,965	2,053,954	16.18					5	126,965	2,053,954	16.18
Holmes	7	452,349	7,618,385	16.84					7	452,349	7,618,385	16.84
Jackson	10	992,849	19,193,072	19.33	1	36,017	453,814	12.60	11	1,028,866	19,646,886	19.10
Jefferson	20 ³	1,920,237	55,844,418	29.08					20 ³	1,920,237	55,844,418	29.08
Lawrence	2	26,532	442,398	16.67					2	26,532	442,398	16.67
Mahoning	2	207,606	5,825,161	28.06					2	207,606	5,825,161	28.06
Meigs					2	3,665,806	170,092,029	46.40	2	3,665,806	170,092,029	46.40
Monroe					1	1,980,914	71,005,154	35.84	1	1,980,914	71,005,154	35.84
Muskingum	4	900,320	33,558,594	37.27	1	30,562	395,522	12.94	5	930,882	33,954,116	36.48
Noble	9	3,361,194	114,635,279	34.11					9	3,361,194	114,635,279	34.11
Perry	3	488,084	7,926,206	16.24	1	1,152,400	32,848,355	28.50	4	1,640,484	40,774,561	24.86
Stark	8	194,061	2,961,381	15.26					8	194,061	2,961,381	15.26
Tuscarawas	46	2,107,883	44,394,470	21.06					46	2,107,883	44,394,470	21.06
Vinton	17 ³	1,476,756	33,064,398	22.39	1	711,249	32,995,151	46.39	18 ³	2,188,005	66,059,549	30.19
Washington	1 ³	65,383	1,238,506	18.94					1 ³	65,383	1,238,506	18.94
Wayne	1 ⁴	31,910	213,559	10.00					1 ⁴	31,910	213,559	10.00
TOTAL	243	20,864,685	\$586,714,900	\$28.12	13	10,856,780	\$384,637,579	\$35.43	256	31,721,465	\$971,352,479	\$30.62

¹Sales reported from mines operating in more than one county were evenly split between the counties involved unless a by-county breakdown was provided by the operator.

²The FOB value of coal sold was estimated for those mines which failed to report this information. These estimates were calculated using a countywide-average price per ton by mining method based on reported FOB values deemed to be reliable.

³Does not include mines extending into this county from adjoining counties.

⁴This mine extends into Wayne County from Holmes County and is not included in the total number of mines.

TABLE 10.—1989 Ohio coal-mine employment¹, by occupational group and month

Occupational group	Number of employees												
	Monthly average	January	February	March	April	May	June	July	August	September	October	November	December
All production workers	4,005	4,123	4,118	4,110	4,025	4,012	4,117	3,983	3,978	4,094	3,945	3,783	3,778
Underground mines													
Tonnage employees	410	379	386	388	398	396	410	379	410	454	445	441	439
Underground production employees	1,293	1,337	1,336	1,336	1,317	1,303	1,342	1,285	1,279	1,331	1,222	1,211	1,213
Surface production employees	44	43	44	45	45	45	50	40	43	46	41	41	41
Surface mines													
Strip miners	2,226	2,337	2,321	2,310	2,232	2,227	2,282	2,248	2,219	2,230	2,209	2,053	2,048
Auger miners	32	27	31	31	33	41	33	31	27	33	28	37	37
Reclamation	169	160	151	168	152	182	173	196	196	212	157	159	124
Supervisory, technical, and clerical	1,234	1,284	1,274	1,270	1,248	1,238	1,239	1,256	1,248	1,228	1,182	1,174	1,165
Central preparation plant, central shop, etc.	1,114	1,171	1,164	1,167	1,152	1,142	1,142	1,128	1,169	1,078	1,068	1,005	976
TOTAL	6,522	6,738	6,707	6,715	6,577	6,574	6,671	6,563	6,591	6,612	6,352	6,121	6,043

¹Reflects employment as reported. Employment was not included for mines which were owner operated or where coal extraction was incidental to principal operation.

TABLE 11.—1989 Ohio coal-mine production employment¹, by county and month

County ²	Number of employees												
	Monthly average	January	February	March	April	May	June	July	August	September	October	November	December
Athens	17	21	14	16	17	13	13	17	18	19	18	19	19
Belmont	654	628	665	643	629	630	701	634	695	729	685	599	611
Carroll	80	73	76	78	75	78	82	87	88	85	78	77	78
Columbiana	155	166	156	162	168	167	167	145	141	156	150	144	142
Coshocton	260	285	268	243	238	252	264	271	264	256	272	256	250
Guernsey	21	21	20	20	20	20	20	18	25	25	21	21	21
Harrison	239	208	231	241	276	272	282	263	247	250	232	182	177
Hocking	25	27	28	26	23	24	22	23	23	29	25	25	25
Holmes	33	33	34	34	33	33	39	34	30	31	31	31	32
Jackson	73	94	102	98	79	71	69	63	64	53	60	57	72
Jefferson	245	258	236	245	262	246	260	246	232	239	241	238	235
Lawrence	1	10	0	0	0	0	0	0	0	0	0	0	0
Mahoning	22	20	19	19	19	20	20	20	20	21	23	28	28
Meigs	611	636	637	634	629	626	624	623	594	629	567	566	567
Monroe	220	222	223	224	199	200	200	203	211	234	241	241	241
Muskingum	87	90	88	89	76	76	76	100	97	100	86	84	82
Noble	347	378	376	377	385	380	362	318	322	321	331	315	308
Perry	264	273	272	266	248	249	252	256	256	269	269	274	278
Stark	40	46	46	46	39	39	37	37	39	38	41	41	37
Tuscarawas	229	238	235	244	220	234	228	246	229	209	207	226	225
Vinton	372	382	376	385	379	371	387	374	378	396	356	348	339
Washington	7	12	14	18	7	7	8	1	1	1	7	7	7
Wayne	3	2	2	2	4	4	4	4	4	4	4	4	4
TOTAL	4,005	4,123	4,118	4,110	4,025	4,012	4,117	3,983	3,978	4,094	3,945	3,783	3,778

¹Reflects employment as reported. Employment was not included for mines which were owner operated or where coal extraction was incidental to principal operation.

²For those operations reporting activity in more than one county, employment was evenly split (to the nearest whole employee) between the counties involved unless a by-county breakdown was provided by the operator.

TABLE 12.—1989 Ohio coal-mine employment¹ in central preparation plants, central shops, etc., by county and month

County ²	Number of employees												
	Monthly average	January	February	March	April	May	June	July	August	September	October	November	December
Belmont	147	157	155	155	158	157	159	161	163	150	150	113	85
Carroll	3	0	0	0	0	0	0	0	0	2	1	1	1
Columbiana	34	34	34	34	33	33	33	33	33	33	36	36	36
Coshocton	41	42	42	42	42	42	43	42	41	40	40	41	40
Harrison	35	39	36	41	40	40	40	39	39	41	44	16	12
Jackson	17	16	16	16	16	16	16	20	20	20	16	16	16
Jefferson	29	38	38	36	28	27	26	25	27	28	27	27	25
Lawrence	26	27	29	31	29	26	25	20	22	23	26	26	26
Mahoning	13	15	14	14	12	12	12	12	13	13	14	13	13
Meigs	176	201	201	201	201	201	200	200	225	166	104	106	105
Monroe	40	45	46	46	36	35	36	36	34	35	42	42	42
Muskingum	72	52	49	49	60	60	61	97	96	96	80	79	81
Noble	237	262	263	261	250	248	249	211	211	210	227	227	230
Perry	42	43	41	41	43	41	41	41	41	41	42	43	44
Scioto	34	34	34	34	34	34	34	34	34	34	34	34	34
Stark	1	3	3	3	0	0	0	0	0	1	1	1	1
Tuscarawas	53	49	49	49	54	54	54	54	54	53	49	50	50
Vinton	117	114	114	114	116	116	113	103	116	92	135	134	135
TOTAL	1,114	1,171	1,164	1,167	1,152	1,142	1,142	1,128	1,169	1,078	1,068	1,005	976

¹Reflects employment as reported. Employment was not included for mines which were owner operated or where coal extraction was incidental to principal operation.²For those operations reporting activity in more than one county, employment was evenly split (to the nearest whole employee) between the counties involved unless a by-county breakdown was provided by the operator.³Averages fewer than one employee per month.TABLE 13.—1989 Ohio coal-mine employment¹ in supervisory, technical, and clerical positions, by county and month

County ²	Number of employees												
	Monthly average	January	February	March	April	May	June	July	August	September	October	November	December
Belmont	174	192	186	187	173	162	161	182	184	175	167	158	159
Carroll	16	14	14	16	17	17	17	17	17	17	14	14	12
Columbiana	35	43	39	39	37	37	36	32	32	33	30	29	29
Coshocton	72	72	68	68	66	70	72	76	75	75	72	76	73
Gallia	2	2	2	2	2	2	2	2	2	2	2	2	2
Guernsey	7	7	7	7	7	7	7	7	8	8	7	7	7
Harrison	55	50	53	53	61	57	62	62	59	59	51	47	45
Hocking	5	7	7	7	3	4	4	4	4	4	5	5	5
Holmes	5	5	5	5	5	5	6	5	4	5	6	6	6
Jackson	8	10	10	10	9	9	9	7	7	6	6	6	6
Jefferson	62	68	65	66	62	63	62	61	60	61	60	61	60
Lawrence	10	11	11	11	11	11	10	10	10	10	10	10	10
Mahoning	6	7	7	7	7	7	6	6	6	6	6	6	6
Meigs	252	266	265	265	265	265	261	260	260	251	224	222	222
Monroe	73	78	78	78	70	68	66	67	68	72	74	75	76
Muskingum	40	33	33	33	34	34	34	51	51	51	40	40	39
Noble	134	141	142	140	140	140	141	123	122	122	132	130	127
Perry	65	72	72	72	66	65	66	66	66	65	65	66	68
Scioto	5	5	5	5	5	5	5	5	5	5	5	5	5
Stark	11	9	11	11	11	11	11	10	9	10	13	13	13
Tuscarawas	63	61	64	60	60	64	63	76	74	69	51	54	52
Vinton	131	127	126	125	136	133	137	126	123	120	140	140	141
Washington	2	3	3	2	1	1	1	1	1	2	1	1	1
Wayne	1	1	1	1	0	1	0	0	1	0	1	1	1
TOTAL	1,234	1,284	1,274	1,270	1,248	1,238	1,239	1,256	1,248	1,228	1,182	1,174	1,165

¹Reflects employment as reported. Employment was not included for mines which were owner operated or where coal extraction was incidental to principal operation.²For those operations reporting activity in more than one county, employment was evenly split (to the nearest whole employee) between the counties involved unless a by-county breakdown was provided by the operator.

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TABLE 14.—1989 Ohio surface coal-mine reclamation employment¹, by county and month

County ²	Number of employees												
	Monthly average	January	February	March	April	May	June	July	August	September	October	November	December
Belmont	23	22	16	27	20	26	26	33	35	28	14	22	16
Carroll	2	2	2	2	4	4	4	0	0	1	3	3	3
Columbiana	9	6	10	10	10	12	13	11	12	8	5	5	4
Coshocton	3	1	0	0	0	0	0	0	0	0	0	0	0
Harrison	14	43	38	42	1	2	1	2	6	2	6	12	10
Jackson	1	0	0	0	1	1	0	0	0	4	0	0	0
Jefferson	7	0	0	0	2	20	3	10	13	10	10	9	7
Mahoning	3	5	5	5	3	3	3	3	1	1	0	0	0
Muskingum	18	12	11	12	14	15	17	28	27	26	21	20	16
Noble	59	54	53	59	58	58	64	59	59	61	66	66	54
Stark	11	0	0	0	21	21	21	17	14	18	5	5	5
Tuscarawas	17	9	10	8	11	13	14	26	24	45	24	14	6
Vinton	3	3	3	3	3	3	3	3	3	3	3	3	3
Washington	2	3	3	0	4	4	4	4	2	5	0	0	0
TOTAL	169	160	151	168	152	182	173	196	196	212	157	159	124

¹Reflects employment as reported. Employment was not included for mines which were owner operated or where coal extraction was incidental to principal operation.²For those operations reporting activity in more than one county, employment was evenly split (to the nearest whole employee) between the counties involved unless a by-county breakdown was provided by the operator.³Averages fewer than one employee per month.

TABLE 15.—1989 Wage and salary payments to Ohio coal-mine employees, by county and occupational group

County ¹	Wage and salary payments (nearest whole dollar) ²								
	All occupations	Tonnage employees	Underground production employees	Surface production employees	Strip miners	Auger miners	Central preparation plant, central shop, etc.	Supervisory, technical, and clerical	Reclamation
Athens	\$466,600				\$466,600				
Belmont	37,397,220	\$6,981,832	\$6,756,123	\$1,259,975	9,234,686	\$5,402	\$5,355,124	\$7,507,305	\$296,773
Carroll	2,376,669				1,981,043		3,522	336,860	55,244
Columbiana	7,660,930	2,140,671	566,130	18,000	2,248,449		1,181,284	1,321,553	184,843
Coshocton	13,702,255				9,186,794		1,311,821	3,203,571	69
Gallia	30,695							30,695	
Guernsey	865,813				717,459			148,354	
Harrison	14,793,831	276,201	301,317	98,790	9,579,666		1,371,125	2,707,701	459,031
Hocking	756,618				583,616			173,002	
Holmes	1,027,054				892,233			134,821	
Jackson	2,827,865		99,495	25,183	1,834,183		695,680	164,228	9,096
Jefferson	11,833,233				8,341,926	18,651	852,212	2,492,175	128,269
Lawrence	774,881				12,000		506,890	255,991	
Mahoning	1,184,985				613,767		351,580	172,436	47,202
Meigs	40,763,246		21,966,117				6,481,779	12,315,350	
Monroe	15,308,201	2,605,954	6,427,545	732,515			1,785,277	3,756,910	
Muskingum	7,375,664		247,237		2,620,435	5,793	2,307,104	1,660,668	534,427
Noble	28,178,230				12,721,263	170,816	7,792,040	5,745,293	1,748,818
Perry	12,702,884	2,876,321	3,903,634		1,548,215		1,245,513	3,129,201	
Scioto	2,104,954						1,534,183	570,771	
Stark	1,030,569				658,389		19,566	265,826	86,788
Tuscarawas	9,501,105				5,897,851	204,699	1,332,027	1,731,041	335,487
Vinton	23,573,926		9,870,758		3,653,413		3,687,596	6,289,727	72,432
Washington	365,680				255,897			45,762	64,021
Wayne	121,795				102,769			19,026	
TOTAL	\$236,724,903	\$14,880,979	\$50,138,356	\$2,134,463	\$73,150,654	\$405,361	\$37,814,323	\$54,178,267	\$4,022,500

¹For those operations reporting activity in more than one county, wage and salary payments were evenly split between the counties involved unless a by-county breakdown was provided by the operator.²For those operations reporting only a total wage and salary payment to all workers, an equal pay rate was assumed for all employees. In cases where quarterly employment was reported but wage and salary payments were not, wage and salary payments for that quarter were estimated from reported payments in the other quarters to arrive at the annual figure.

INDUSTRIAL MINERALS

Industrial minerals, other than mineral fuels, were produced in a total of 85 Ohio counties in 1989. The combined value of all nonfuel industrial minerals sold in 1989 was \$392,206,835.

The average annual employment reported in 1989 for industrial mineral operations was 2,893 production employees and 1,264 nonproduction employees. In 1989, 300 companies produced or sold industrial minerals from 454 operations. Seventeen of these companies produced more than one mineral commodity from 19 operations.

The multiple-commodity operations employed 184 production workers and 22 nonproduction workers. Ten operations produced clay and shale and employed 30 production workers and 1 nonproduction worker; 1 operation produced limestone and shale and employed 37 production workers and 2 nonproduction workers; 4 operations produced limestone and clay and employed 89 production workers and 9 nonproduction workers; 1 operation produced sand and gravel and clay, but no employment

information was given; 2 operations produced sandstone and sand and gravel and employed 12 production workers and 3 nonproduction workers; 2 operations produced sand and gravel and limestone and employed 9 production workers and 3 nonproduction workers; 2 operations produced sand and gravel and peat and employed 1 production worker and 1 nonproduction worker; 1 operation produced limestone, sandstone, clay, and shale and employed 6 production workers and 3 nonproduction workers. The 184 multiple-commodity production employees worked an average of 169 days in 1989. Total wages reported in 1989 for 184 production employees and 22 nonproduction employees at multiple-commodity operations were \$3,841,622. The average annual wage was \$18,649.

The total reported wages for all employees at industrial mineral operations in 1989 were \$104,834,596. The average annual wage, based on those employees for whom wages were reported, was \$25,219.

TABLE 16.—1989 Value of Ohio industrial minerals

Commodity	Sales (tons)	Change from 1988 (tons)	Value ¹ (dollars)	Percent of total value
Limestone and dolomite	47,694,253	+2,005,020	\$172,777,937	44.0
Sand and gravel	41,019,770	-1,394,638	134,596,482	34.3
Salt	4,277,846	+547,348	49,993,325	12.8
Sandstone and conglomerate	1,794,444	-12,202	26,209,615	6.7
Clay	1,508,443	-700,871	3,849,516	1.0
Shale	1,922,528	+20,350	2,350,256	0.6
Gypsum	237,039	-2,789	2,251,872	0.6
Peat	34,308	+9,731	177,832	<0.1
TOTAL	98,488,631	+471,949	\$392,206,835	100.0

¹The FOB value of industrial minerals sold was estimated for those mines which failed to report this information and for those producing material for captive use. These estimates were calculated using a statewide-average price per ton based on reported FOB values.



Limestone quarry on Johnsons Island, north of Sandusky in Sandusky Bay, Ottawa County. This quarry, which was in operation in 1912, produced stone for riprap and breakwaters. Photo from a postcard (no postmark) in the collection of David A. Stith. Photo probably taken prior to 1925.

TABLE 17.—1989 Employment at Ohio industrial mineral operations, by county and commodity

County ¹	Number of employees ²													
	Total		Limestone and dolomite		Sand and gravel		Sandstone and conglomerate		Clay		Shale		Salt	
	Pro- duction	Non- pro- duction	Pro- duction	Non- pro- duction	Pro- duction	Non- pro- duction	Pro- duction	Non- pro- duction	Pro- duction	Non- pro- duction	Pro- duction	Non- pro- duction	Pro- duction	Non- pro- duction
Adams	20	27	20	27	2	3								
Allen	29	9	27	9	16	6								
Ashland	17	6			10	4								
Ashtabula	11	4												
Athens	7	16	5	1	1	15			1					
Auglaize	22	9	13	2	8	7			1					
Belmont	16	9	14	3	2	6								
Brown	1		1											
Butler	65	78			65	78								
Carroll	10	6	1	1	2	3	7	2						
Champaign	17	6												
Clark	38	16	3	2	17	6								
Clermont	5	6			35	14								
Clinton	17	9	17	9	5	6								
Columbiana	9	3												
Coshocton	93	25	4	1	8	16	80	7	2					3
Crawford	45	167	45	2					3				43	1
Cuyahoga	46													
Darke	9	4	7	2	2	3								
Defiance	4				4	4								
Delaware	74	10	74	10	5 ⁶	3	3	1						
Erie	82	22	74	21	4	3								
Fairfield	4	3												
Fayette	2	8	2	2										
Franklin	173	44	70	12	102	31			1		1			
Fulton	6													
Gallia	2	12			2	12								
Geauga	24	66			14	5	10	61						4
Greene	55	16	14	4	38	12			3					
Guernsey	5	2	5	2										
Hamilton	67	80			67	80								
Hancock	60	4	60	4										
Hardin	4	13	4	13										
Harrison	2	2												
Henry	5				5									
Highland	16	19	16	19										
Hocking	3				4									
Holmes	28	7			11	2	10	3	1	1	1			3
Huron	8	5			7	5	1		3	5				5
Jackson	13	6												10
Jefferson	6													
Knox	55	34			24	33	31	1						
Lake	111	2			5 ⁵	2 ⁵			6	3			106	
Lawrence	19	6	10	2	3	1							1	
Licking	32	22			24	19								2

LIMESTONE AND DOLOMITE

Limestone and dolomite were sold or produced by 75 companies at 118 operations in 54 Ohio counties during 1989. Sales of limestone and dolomite totalled 47,694,253 tons; Erie, Franklin, Wyandot, Sandusky, and Ottawa Counties accounted for 37.7 percent of those sales. Reported known production totalled 48,823,737 tons.

Lime produced from Ohio limestone and dolomite totalled 1,365,086 tons in 1989, and came from five operations in Ottawa, Sandusky and Wyandot Counties. Ohio leads the nation in the production of lime.⁵

The total value⁶ of limestone and dolomite sold in 1989

⁵Information from U.S. Bureau of Mines.

⁶See footnote 2, p. 9.

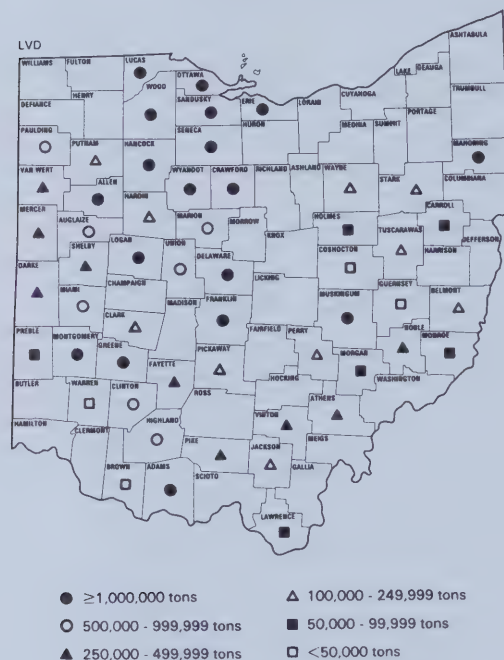


FIGURE 6.—Sales of limestone and dolomite in Ohio in 1989, by county.

was \$172,777,937. Average price per ton was \$3.62.

An annual average of 1,250 employees worked an average of 209 days to produce limestone and dolomite. Total wages reported in 1989 for 1,250 production employees and 370 nonproduction employees were \$44,519,455. The average annual wage, based on those employees for whom wages were reported, was \$27,481. An additional 138 employees mined limestone and dolomite along with one or more other mineral commodities.

Primary uses for crushed and broken limestone and dolomite were road construction/resurfacing and building. Other major uses for various forms of limestone and dolomite included stone for portland cement concrete, stone for asphaltic concrete, riprap, portland cement manufacture, flux stone, and aglime (a noncalcined product).

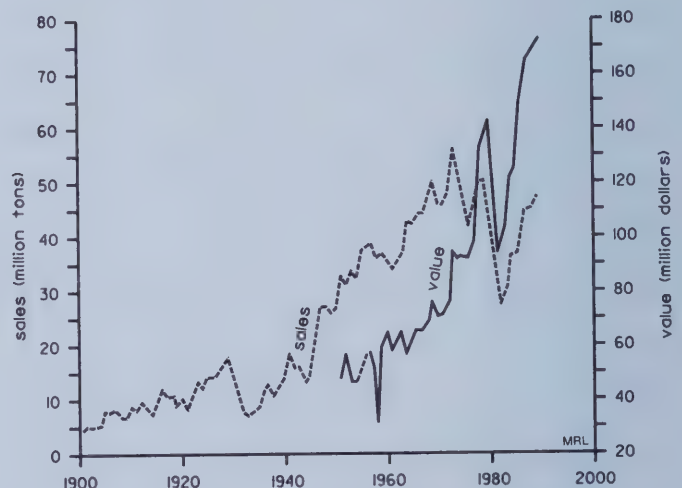


FIGURE 7.—Sales and value of limestone and dolomite in Ohio. Value line dashed where data not available.

1989 OHIO MINERAL INDUSTRIES REPORT

TABLE 19.—1989 Production of lime from Ohio stone,
by county and type

County	Total tons	Building (tons)	Chemical and industrial (tons)	Refractory (tons)	Other (tons)
Ottawa	96,986	54,799	42,187		
Sandusky	1,147,854		795,744	28,167	323,943
Wyandot	120,246		120,246		
TOTAL	1,365,086 ¹	54,799	958,177	28,167	323,943

¹Burning produced a 47.7 percent weight loss.

Limestone quarry and lime kilns at Marblehead, Ottawa County. Photo from a postcard (no postmark) in the collection of David A. Stith. Photo probably taken prior to 1925.

SAND AND GRAVEL

Sand and gravel were sold or produced by 196 companies at 261 operations in 60 Ohio counties during 1989. Sales⁷ of sand and gravel totalled 41,019,770 tons, of which sand comprised 20,458,435 tons and gravel comprised 20,561,335 tons. Ohio ranks sixth nationally in the production of industrial sand.⁸ Hamilton, Franklin, Butler, Portage, and Greene Counties led in sales, accounting for 46.7 percent of the total. Reported known production⁷ of sand and gravel totalled 42,450,090 tons in 1989.

A total of 245,837 tons of sand were dredged from Lake Erie, and 33,255 tons of sand and 35,946 tons of gravel were

dredged from the Maumee River. No gravel was dredged from Lake Erie in 1989. Total sand and gravel production from Lake Erie and the Maumee River was 315,289 tons in 1989.

The total value⁹ of sand and gravel sold in 1989 was \$134,596,482. Average price per ton was \$3.28.

An annual average of 954 employees worked an average of 180 days in 1989 to produce sand and gravel. Total wages of \$35,306,437 were reported for 954 production employees and 587 nonproduction employees. The average annual wage, based on those employees for whom wages were reported, was \$22,813. An additional 18 employees mined sand and gravel along with one or more other mineral commodities.

Road construction/resurfacing, building, portland cement concrete, and asphaltic concrete were the major uses for Ohio sand and gravel in 1989.

⁷Please note—Sales and production figures for sand and gravel include material dredged from Lake Erie and the Maumee River.

⁸Information from U.S. Bureau of Mines.

⁹Includes reported and estimated values. See footnote 2, p. 9.

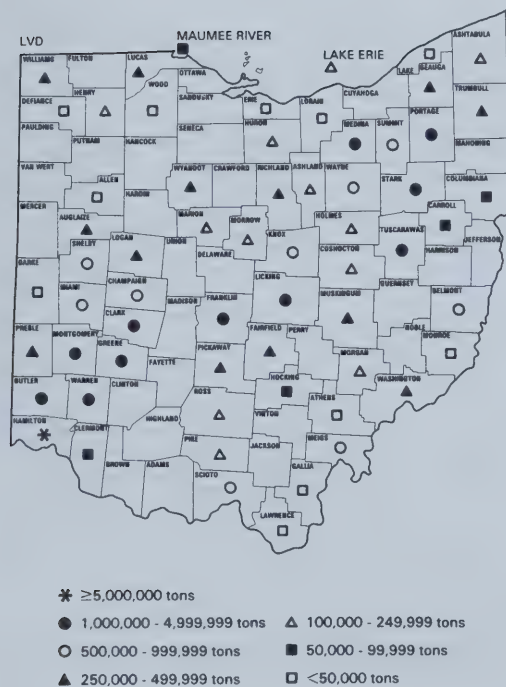


FIGURE 8.—Sales of sand and gravel in Ohio in 1989, by county.

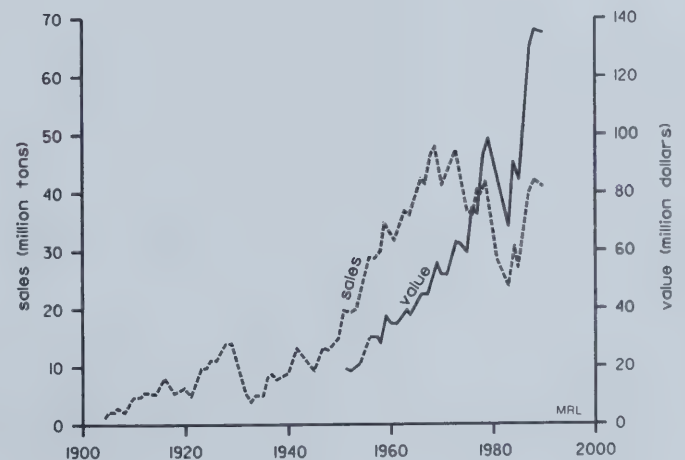


FIGURE 9.—Sales and value of sand and gravel in Ohio. Value line dashed where data not available. Figures from 1984 to 1989 include Lake Erie and Maumee River dredged material.

TABLE 20.—1989 Ohio sand and gravel sales, by county and type

County	Tons sold													
	Total sand and gravel	Total sand	Total gravel	Building		Portland cement concrete		Asphaltic concrete		Road construction/resurfacing		Filtration		Foundry sand
				Sand	Gravel	Sand	Gravel	Sand	Gravel	Sand	Gravel	Sand	Gravel	
Allen	34,086	28,506	5,580		5,192			16,597	2,488		123,587	11,909		893
Ashland	240,792	72,237	168,555	12,606	28,283			1,340		53,325			4,073	388
Ashtabula	248,147	130,831	117,316	6,512	34,732	7,000		9,225		13,000		500	94,594	14,197
Athens	31,982	20,140	11,842					4,369	4,875	13,674	6,836		2,097	75,632
Auglaize	310,775	148,576	162,199	3,481		115,568	139,385						29,527	131
Belmont	519,903	226,065	293,838		2,338	56,862	92,946	169,203	48,915	1,022,043	12,554	3,746	160,353	110,897
Butler	3,983,625	1,500,625	2,483,000	190,093	549,567	86,301	90,211	38,089		53,313	40,423		282,175	
Carroll	93,736	53,313	40,423							100,671	144,869		24,409	97,634
Champaign	637,516	208,695	428,821	83,615	186,318			85,972	96,580	210,653	305,876		1,880	161,223
Clark	1,373,390	449,532	923,858	17,432	206,109	133,595	154,070					1,945		
Clermont	99,708	52,720	46,988										52,720	46,988
Columbiana	75,005	3,870	71,135										3,870	71,135
Coshocton	226,208	121,444	104,764	13,065	4,743	14,678	14,678	41,639	19,716	45,243	56,904		4,756	4,688
Darke	39,753	18,930	20,823										18,930	20,823
Defiance	20,300		20,300		2,736						14,388			3,176
Erie	16,890	15,890	1,000											
Fairfield	329,166	174,563	154,603	14,569	33,830	103,467	34,354	37,354	46,739	11,839	33,925	438	14,658	1,000
Franklin	4,132,257	1,583,560	2,548,697	310,784	548,148	4,545	3,488	66,729	64,139	989,002	1,727,294		6,896	5,755
Gallia	7,273	1,793	5,480										202,520	205,628
Geauga	311,712	228,455	83,257	100,459	38,874	110,187				8,957	9,548	27,019	1,793	5,480
Greene	1,979,333	830,942	1,148,391	21,056	93,484	44,855	39,691	32,242	26,576	415,193	616,866		8,852	7,816
Hamilton	5,460,785	2,697,132	2,763,653	199,100	487,589	675,900	327,184	209,428	185,021	1,307,479	1,633,084	1,011	317,596	371,774
Henry	114,460	114,460								114,460			304,214	125,067
Hocking	85,000	42,500	42,500										42,500	42,500
Holmes	175,061	66,448	108,613	3,595	5,267	35,537	51,450	13,751		3,444	30,376		10,121	6,061
Huron	161,533	149,389	12,144											
Knox	778,060	368,805	409,255	72,975	10,576	62,174		1,715	58,600	165,885	92,199	4,110	8,415	1,568
Lake	49,300	32,500	16,800	21,467	35,120	15,000		69,200	2,000				112,253	223,336
Lawrence	22,349			1,500	4,000			16,000						
Licking	1,129,739	588,826	540,913	131,540	88,489	116,900		77,434	97,804	179,925	222,975		22,349	
Logan	379,046	239,992	139,054										52,987	94,661
Lorain	1,529	1,529		28,370	5,721	98,301						9,323	103,998	133,333
Lucas	305,723	300,185	5,538										1,529	
Marion	112,738	93,944	18,794	300,185	1,403	35,463	803	283,873	6,138	309,774	157,567	3	63,605	5,538
Medina	1,170,991	887,669	283,322	58,478	119,617	1,172		223,013	91,005	12,440	12,440			
Meigs	546,352	351,368	194,984	37,327	56,497	78,588	34,560	4,925	15,666	261,839	376,790		92,854	482
Miami	908,788	359,618	549,170	36,408									2,570	120,306
Monroe	5,139	2,570	2,569										12,261	2,569
Montgomery	1,511,491	512,929	998,562	147,320	353,307	132,408	169,095	68,485	67,928	152,455	218,668	4,103	185,461	185,461
Morgan	141,227	98,859	42,368			11,596	4,969	11,596	4,970	11,596	4,970	11,596	52,475	22,489

Morrow	112,032	19,977	92,055	19,929	28,112	18,189	14,126	60,097	41,622	48	55,700	1,973			
Muskingum	296,571	161,426	135,145	2,599						29,492	274				6,276
Pickaway	259,926	106,570	153,356							106,570					51,528
Pike	181,456	181,495	36,661	26,120	4,522	142,777	3,603	12,598	8,850						
Portage	3,612,846	2,398,959	1,213,887	643,015	3,258,52	579,594	109,530	152,561	116,754	263,379	299,312	1,405			
Preble	275,534	76,380	199,154	30,552	59,746	15,276	39,832	7,638	19,913	22,914	79,663				362,439
Richland	365,902	67,839	298,063	50,446	226,584	912	70	8,009	44,572	1,600	9,637				17,200
Ross	212,771	109,919	102,852	6,168					73	3,751	2,779				100,000
Scioto	725,491	610,620	114,871	47,000	5,500	419,302		86,401	7,465	30,125	101,562				344
Shelby	535,479	259,816	275,663	7,500	7,500	120,088	120,087	33,500	33,500	658					113,918
Starbuck	1,330,879	653,945	676,934	110,558	25,263	125,790	102,897	122,723	136,268	48,974	138,466				274,040
Summit	536,355	318,014	218,341	223,266	119,085	38,233	19,453	1,060		9,195	25,270	3,965			49,968
Trumbull	408,409	373,408	35,001	101,397	27,911	85,599		152,175		9,452	7,090				24,785
Tuscarawas	1,145,982	584,807	561,175	186,409	153,820	94,696	43,749	139,198	135,772	146,886	185,458				42,376
Warren	1,145,863	432,113	713,750	61,742	53,439					115,399	167,251				493,060
Washington	314,115	149,544	164,571	38,066	61,872				800	8,477	15,205	3,334			83,360
Wayne	689,057	389,657	298,437	31,745	153,353	141,183	40,185	20,345	32,319	10,264	25,000	552			47,030
Williams	208,508	238,221	170,289	9,735	58,093	165,880		31,134	5,765		25,370				81,059
Wood	13,012	13,012													13,012
Wyandot	327,687	231,742	95,945	18,465	9,063	202,636	81,358		2,303	5,604		3,221			
Lake Erie	245,836	245,836				167,583		22,970		55,283					
Maumee River	69,452	33,376	36,076			33,376									36,076
TOTAL	41,019,770	20,458,435	20,561,335	3,619,486	4,258,663	4,291,211	1,731,774	2,332,588	1,425,136	6,333,623	8,659,232	238,549	35,356	3,791,610	4,247,981

TABLE 21.—1989 Ohio Lake Erie and Maumee River sand and gravel production

Area	Production ¹	
	Cubic yards	Short tons
Lake Erie		
Fairport (sand)	90,141	121,690
Maumee Bay	²	
Vermilion-Lorain Inner (sand)	45,430	61,331
Vermilion-Lorain Outer (sand)	46,530	62,815
Maumee River		
Sand	24,633	33,255
Gravel	26,627	35,946
TOTAL	233,361	315,037

¹Production reported in cubic yards; converted to tons in the ratio of 1 cubic yard equals 1.35 short tons.

²No production reported for 1989.

SANDSTONE AND CONGLOMERATE

Sandstone and conglomerate were produced by 15 companies at 27 operations in 16 Ohio counties during 1989. Sales totalled 1,794,444 tons, with Geauga, Perry, Ross, Knox, and Lorain Counties accounting for 85.5 percent of that total. Crushed sandstone and conglomerate accounted for 1,728,953 tons, and dimension stone accounted for 65,491 tons of the total sales. Reported known production of sandstone and conglomerate was 1,973,393 tons in 1989.

The total value¹⁰ of sandstone and conglomerate sold in

1989 was \$26,209,615. Average price per ton was \$15.03 for crushed stone and \$31.96 for dimension stone.

An annual average of 257 employees worked an average of 127 days in 1989 to produce sandstone and conglomerate. Total wages earned in 1989 by 257 production employees and 94 nonproduction employees were \$6,574,018. The average annual wage in 1989 was \$18,729. An additional 18 employees mined sandstone and conglomerate along with one or more other mineral commodities.

Crushed stone was used primarily for glass sand, foundry sand, and aggregate. Dimension stone was used primarily for rough architectural purposes, rough construction, finished stone, and rubble.

¹⁰Includes reported and estimated values. See footnote 2, p. 9.



FIGURE 10.—Sales of sandstone and conglomerate in Ohio in 1989, by county.

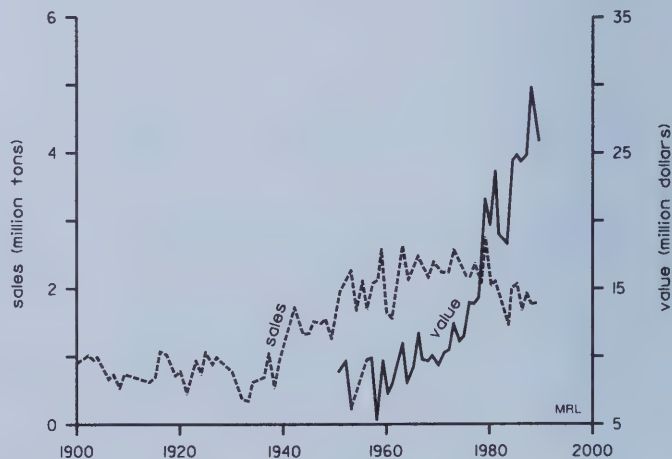


FIGURE 11.—Sales and value of sandstone and conglomerate. Value line dashed where data not available.

TABLE 22.—1989 Ohio sales of crushed sandstone and conglomerate, by county and type

County	Tons sold												
	Total	Foundry sand	Glass sand	Metallurgical pebble	Refractory	Riprap	Aggregate	Silica flour	Polishing/ grinding sand	Fire and furnace sand	Engine sand	Frac sand	Other/ unspecified
Columbiana	79,795						30,715						49,080
Geauga	780,995	209,267	110,816	126,441	17,988	1,823	62,042		45,107	9,800	14,200	13,881	169,630
Huron	14,227					14,227							
Knox	149,882	22,953	54,072					59,324			4,730	6,248	2,555
Lorain	104,678						77,343						27,335
Mahoning	23,137												23,137
Perry	256,672	50,347	102,864					85,174				4,467	13,820
Pike	23,661			11,058						12,603			
Ross	220,342	73,356	89,039								30,300		27,647
Trumbull	29,825						29,825						
Tuscarawas	45,739					11,005				34,734			
TOTAL	1,728,953	355,923	356,791	137,499	17,988	27,055	199,925	144,498	45,107	57,137	49,230	24,596	313,204



Quarry in the Mahoning sandstone near Corning, Perry County. The stone was used for bridges and viaducts. The quarry was abandoned in 1914. Photo from a postcard postmarked 1910 in the collection of David A. Stith. Message on postcard indicated the quarrymen earned \$1.75 a day.

TABLE 23.—1989 Ohio sales of dimension sandstone and conglomerate, by county and type

County	Tons sold									
	Total	Refractory	Rough construction	Rubble	Grindstones	Rough architectural	Finished	Curbing	Flagging	Other/ unspecified
Carroll	1,278						1,278			
Coshocton	25,096	239			1,072	23,785				
Erie	2,305	59		1,299			880		67	5,000
Geauga	8,500					3,500				
Holmes	2,381					2,381				
Knox	201					201				
Lorain	10,608	305		5,362	10		4,627		304	
Scioto	15,122		15,122							
TOTAL	65,491	603	15,122	6,661	1,082	29,867	6,785	0	371	5,000

CLAY

Clay was produced by 24 companies at 36 operations in 15 Ohio counties during 1989. Clay sales (including material for captive use) totalled 1,508,443 tons. Tuscarawas, Greene, Paulding, Perry, and Stark Counties accounted for 91.2 percent of the total sales. Ohio leads the nation in the production of common clay, and ranks second in the production of fire clay.¹¹ The total value¹² of clay sold

in 1989 was \$3,849,516. Average price per ton was \$2.55. Reported known production of clay was 1,526,576 tons.

An annual average of 40 employees worked an average of 104 days in 1989 mining clay. Total wages reported in 1989 for 40 production employees and 11 nonproduction employees were \$931,021. The average annual wage, based on those employees for whom wages were reported, was \$18,255. An additional 125 employees mined clay along with one or more other mineral commodities.

Clay mined in Ohio in 1989 was largely for construction and captive use in the production of common clay products and cement manufacture.

¹¹Information from U.S. Bureau of Mines.

¹²Includes reported and estimated values. See footnote 2, p. 9.

TABLE 24.—1989 Ohio clay sales, by county and type

County	Tons sold					
	Total	Common clay products	Glazed ware	Vitrified products	Cement manufacture	Other/unspecified
Athens	182					182
Auglaize	3,716	3,716				
Coshocton	875	875				
Geauga	408					408
Greene	146,492				146,492	
Hocking	22,624	7,943		14,681		
Holmes	21,481					
Jackson	24,251	24,251				
Lawrence	24,077	9,241		2,993		2,843
Muskingum	21,350	12,678		8,672		
Paulding	115,048				115,048	
Perry	48,345	48,345				
Stark	27,677	26,571				
Tuscarawas	1,045,177	334,700	9,754	60,805		568,050
Wyandot	6,740	6,740				
TOTAL	1,508,443	496,541	9,754	87,151	261,540	571,483

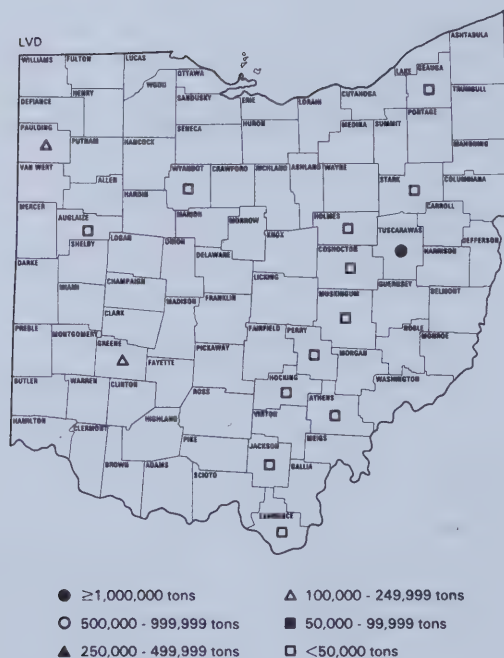


FIGURE 12.—Clay sales in Ohio in 1989, by county.

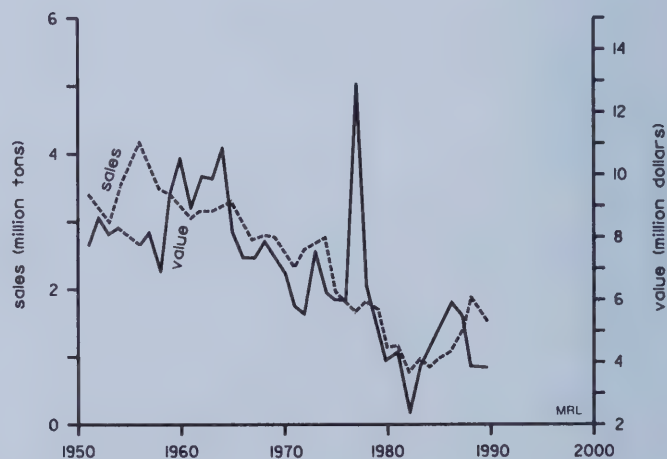


FIGURE 13.—Sales and value of clay in Ohio. Value line dashed where data not available.

SHALE

Shale was produced by 18 companies at 27 operations in 15 Ohio counties during 1989. Sales totalled 1,922,528 tons, and production totalled 1,934,297 tons. Tuscarawas, Cuyahoga, Marion, Franklin, and Mahoning Counties accounted for 90.9 percent of the total sales. The total value¹³ of shale sold (including material for captive use) in 1989 was

¹³Includes reported and estimated values. See footnote 2, p. 9.

\$2,350,256. Average price per ton was \$1.22.

An annual average of 34 employees worked an average of 129 days in 1989 mining shale. Total wages reported in 1989 for 34 production employees and 5 nonproduction employees were \$714,917. The average annual wage, based on those employees for whom wages were reported, was \$18,331. An additional 73 employees mined shale along with one or more other mineral commodities in 1989.

Shale mined in Ohio in 1989 was largely for construction, captive use in the production of common clay products, and lightweight aggregate.

TABLE 25.—1989 Ohio shale sales, by county and type

County	Tons sold					
	Total	Common clay products	Vitrified products	Cement manufacture	Lightweight aggregate	Other/unspecified
Ashland	2,596	2,596				
Ashtabula	500				500	
Columbiana	59,112	55,640				3,472
Coshocton	645	645				
Cuyahoga	233,754				233,754	
Franklin	87,400	87,400				
Harrison	30,975		30,975			
Hocking	13,161		13,161			
Holmes	3,164	3,164				
Licking	19,840		19,840			
Mahoning	60,394			60,394		
Marion	225,359	225,359				
Medina	43,405	43,405				
Noble	2,040	2,040				
Tuscarawas	1,140,183	280,593	7,514			852,076
TOTAL	1,922,528	700,842	71,490	60,394	234,254	855,548



Figure 14.—Shale sales in Ohio in 1989, by county.

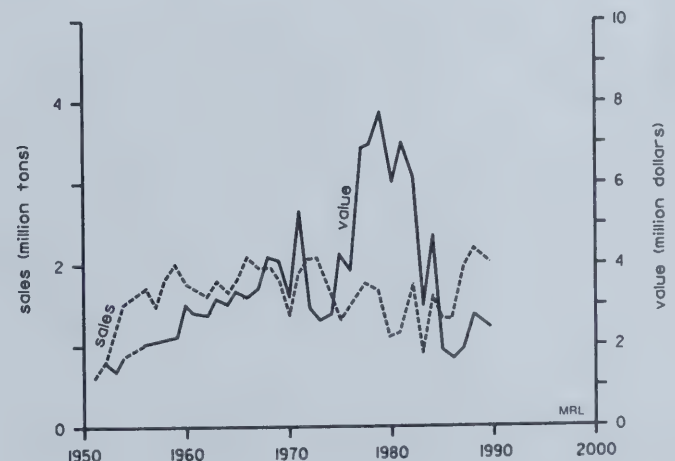


Figure 15.—Sales and value of shale in Ohio. Value line dashed where data not available.

SALT

Salt was produced by 4 companies at 5 operations in 5 Ohio counties during 1989. Ohio is the fourth-largest salt-producing state in the nation and produces about 10 percent of the nation's salt annually.¹⁴ Rock salt sales totalled 3,606,727 tons from 2 underground mines, one each in Cuyahoga and Lake Counties. Three brining operations, one each in Licking, Summit, and Wayne Counties, sold a total of 11,975 tons of salt in brine and 659,144 tons of evaporated salt. Reported known production of salt was 4,244,657 tons in 1989. Total sales of salt in 1989 amounted to 4,277,846 tons with a total value of \$49,993,325. Average price per ton for all salt sold in 1989 was \$11.69. Average price per ton of rock salt was \$11.90 and of salt in brine and evaporated salt was \$10.54.

An annual average of 161 employees worked an average of 318 days in 1989 to produce salt. Total wages in 1989 for 161 production employees and 173 nonproduction employees were \$12,531,424. The average annual wage in 1989 was \$37,519. The primary use for Ohio salt in 1989 was ice control. Salt was also used as an additive in animal feed, for cattle blocks, and as a commercial and residential water-softening agent.

¹⁴Information from U.S. Bureau of Mines.

¹⁵Includes reported and estimated values. See footnote 2, p. 9.

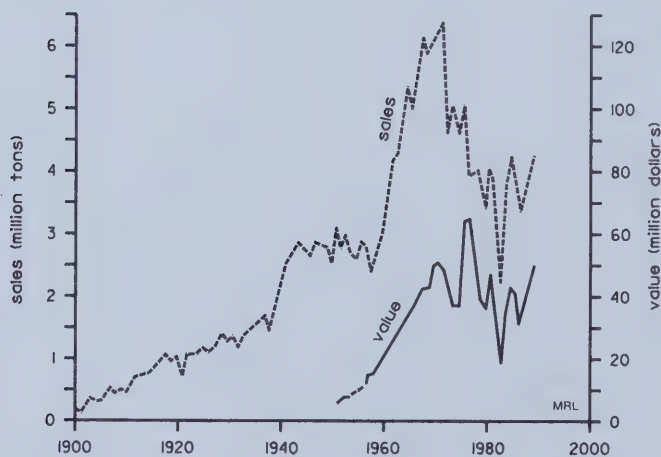


FIGURE 16.—Sales and value of salt in Ohio. Value line dashed where data not available

GYPSUM

Gypsum was produced by 1 company at 1 operation in Ottawa County during 1989. Gypsum production and sales (all material was for captive use) totalled 237,039 tons. Ohio is the tenth-largest gypsum-producing state in the nation.¹⁴ The reported value¹⁵ of the gypsum sold was \$2,251,872. Average price per ton was \$9.50.

An annual average of 13 employees worked 301 days in 1989 producing gypsum. Total wages reported in 1989 for 13 production employees and 2 nonproduction employees were \$415,702. The average annual wage in 1989 was \$27,713. The sole use of gypsum from this operation is for the manufacture of wallboard.

PEAT

Peat was produced by 4 companies at 4 operations in 4 Ohio counties during 1989. Peat sales (including material for captive use) totalled 34,308 tons. Champaign, Portage, Williams, and Stark Counties accounted for 100 percent of the total sales. The total value of the peat sold in 1989 was \$177,832. Average price per ton was \$5.18. Reported known production was 23,660 tons.

No information was reported regarding employment, wages, or days in production.

Peat produced in Ohio was used for mulch, worm culture, and legume inoculation.

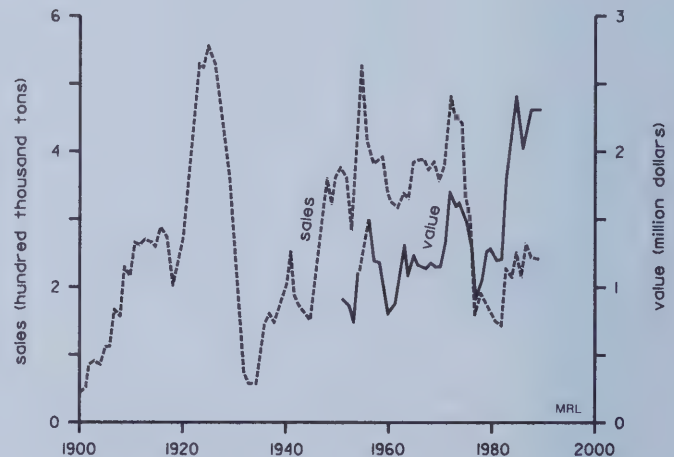


FIGURE 17.—Sales and value of gypsum in Ohio. Value line dashed where data not available. Some figures were calculated because actual figures were not reported in order to maintain confidentiality.

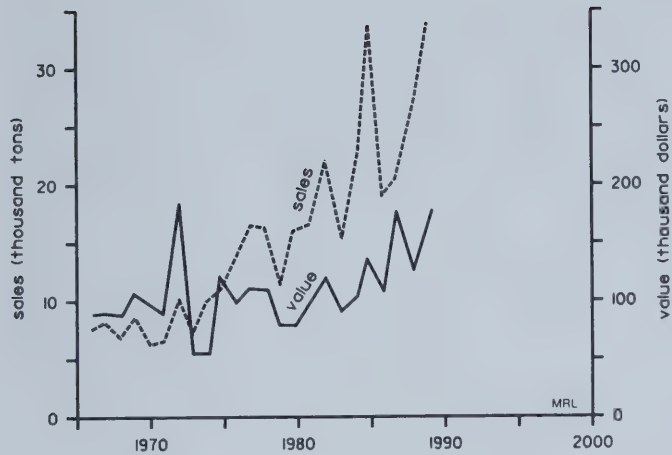


FIGURE 18.—Sales and value of peat in Ohio.

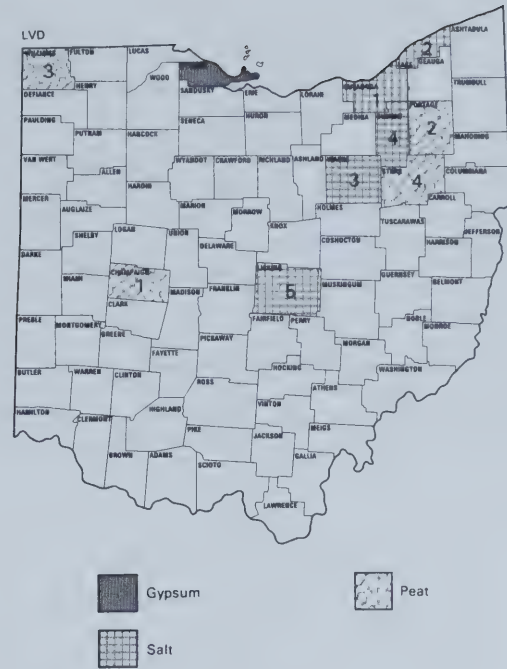


FIGURE 19.—Counties producing salt, gypsum, and peat in Ohio in 1989, and their ranking in sales.



Gypsum quarry of Celotex Corp. in Portage Township, Ottawa County. Photo taken in 1990.

OIL AND GAS

This information is summarized from M. P. McCormac, 1990, 1989 Ohio oil and gas developments: Ohio Department of Natural Resources, Division of Oil and Gas

The Division of Oil and Gas issued 1,869 drilling permits for oil and gas in 1989; the Division estimates that 1,285 wells were actually drilled in 1989. Wells were drilled in 43 of Ohio's 88 counties, but only 41 counties had reported completions. The Division of Oil and Gas received 1,099 well completion reports; 966 wells were productive and 133 were dry holes for a completion rate of 87.9 percent.

The total reported crude oil production in Ohio in 1989 was 10,218,674 barrels, a 12.7 percent decline from 1988. The dollar value of crude oil produced in Ohio in 1989 was \$184,912,511, an increase of 3.9 percent. Average price per barrel in 1989 was \$18.10, a 19 percent increase from the

1988 price.

Natural gas production in Ohio in 1989 was 159,729,510 MCF, a 4.2 percent decline from 1988. This production figure includes an estimated 1,562,057 MCF of gas used on the lease. The dollar value of natural gas produced in Ohio in 1989 was \$407,840,448, a decrease of 4.1 percent from 1988. The value of the estimated volume of gas used on the lease was not used in computing this value. The average price per MCF in 1989 was \$2.55, the same as 1988.

The combined total value of Ohio oil and gas production in 1989 was \$592,752,959, a decline of 1.7 percent from 1988.

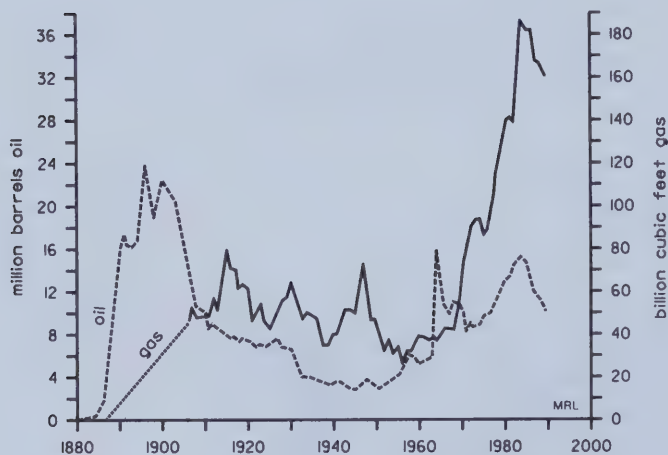


FIGURE 20.—Production of oil and gas in Ohio.

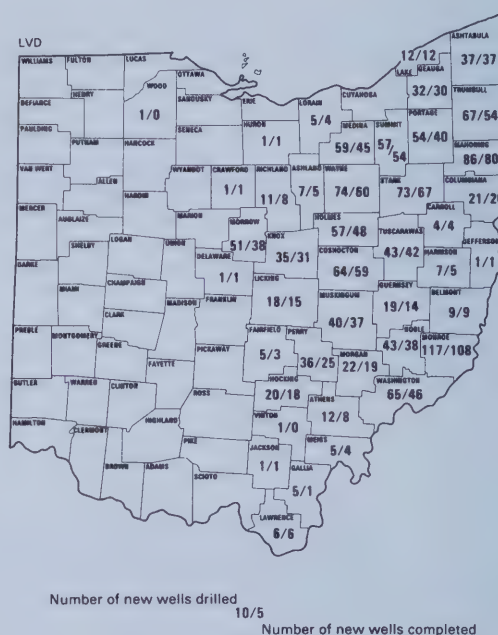


FIGURE 21.—New well drilled for oil and gas in 1989, by county.

TABLE 26.—1989 Ohio summary of new oil and gas well completions by county

County ¹	Development wells		Exploratory wells		Total wells	Percent productive	Drilled footage		
	Productive	Dry	Productive	Dry			Productive	Dry	Total
Ashland	3	2	0	0	5	60.00	1,847	1,411	3,258
Ashtabula	31	4	1	1	37	86.49	122,027	27,987	150,014
Athens	3	5	0	0	8	37.50	11,427	648	12,075
Belmont	7	0	1	1	9	88.89	19,595	6,020	25,615
Carroll	3	0	1	0	4	100.00	22,462	0	22,462
Columbiana	19	0	0	1	20	95.00	108,902	9,921	118,823
Coshocton	34	17	1	7	59	59.32	155,763	156,009	311,772
Crawford	0	0	0	1	1	0.00	0	370	370
Delaware	0	0	1	0	1	100.00	3,620	0	3,620
Fairfield	2	0	0	1	3	66.67	5,677	528	6,205
Gallia	1	0	0	0	1	100.00	1,970	0	1,970
Geauga	26	1	1	2	30	90.00	106,645	17,938	124,583
Guernsey	14	0	0	0	14	100.00	74,735	0	74,735
Harrison	5	0	0	0	5	100.00	29,545	0	29,545
Hocking	18	0	0	0	18	100.00	56,127	0	56,127
Holmes	35	5	0	8	48	72.92	153,612	85,799	239,411
Huron	0	0	0	1	1	0.00	0	4,224	4,224
Jackson	1	0	0	0	1	100.00	2,000	0	2,000
Jefferson	0	1	0	0	1	0.00	0	1,671	1,671
Knox	25	3	1	2	31	83.87	76,541	13,166	89,707
Lake	12	0	0	0	12	100.00	39,680	0	39,680
Lawrence	4	0	2	0	6	100.00	8,491	0	8,491
Licking	13	2	0	0	15	86.67	35,447	4,799	40,246
Lorain	3	0	1	0	4	100.00	12,641	0	12,641
Mahoning	80	0	0	0	80	100.00	436,851	0	436,851
Medina	40	2	0	3	45	88.89	134,687	20,858	155,545
Meigs	4	0	0	0	4	100.00	11,221	0	11,221
Monroe	104	0	3	1	108	99.07	263,096	7,507	270,603
Morgan	18	0	1	0	19	100.00	60,433	0	60,433
Morrow	17	16	0	5	38	44.74	63,165	75,397	138,562
Muskingum	32	1	3	1	37	94.59	147,098	9,513	156,611
Noble	38	0	0	0	38	100.00	121,845	0	121,845
Perry	25	0	0	0	25	100.00	74,431	0	74,431
Portage	35	4	0	1	40	87.50	161,092	20,552	181,644
Richland	1	2	3	2	8	50.00	11,817	14,216	26,033
Stark	63	0	0	4	67	94.03	297,466	27,662	325,128
Summit	51	2	0	1	54	94.44	203,838	14,128	217,966
Trumbull	54	0	0	0	54	100.00	256,087	0	256,087
Tuscarawas	23	8	1	10	42	57.14	122,201	129,722	251,923
Washington	44	0	1	1	46	97.83	210,017	10,300	220,317
Wayne	55	3	1	1	60	93.33	213,617	23,991	237,608
TOTAL	943	78	23	55	1,099	87.90	3,837,716	684,337	4,522,053

¹No well completions were reported for the following counties in 1989: Adams, Allen, Auglaize, Brown, Butler, Champaign, Clark, Clermont, Clinton, Cuyahoga, Darke, Defiance, Erie, Fayette, Franklin, Fulton, Greene, Hamilton, Hancock, Hardin, Henry, Highland, Logan, Lucas, Madison, Marion, Mercer, Miami, Montgomery, Ottawa, Paulding, Pickaway, Pike, Preble, Putnam, Ross, Sandusky, Scioto, Seneca, Shelby, Union, Van Wert, Warren, Williams, and Wyandot. The following counties reported drilling, but no completion reports were filed in 1989: Vinton and Wood.

TABLE 27.—1989 Ohio summary of new oil and gas well completions by producing zone

Producing zone	No. of producing wells	No. of dry holes	Total no. of wells	Total footage	Percent productive
Pennsylvanian undifferentiated	4	5	9	3,897	44.44
Upper Mississippian undifferentiated	5	0	5	9,912	100.00
Lower Mississippian "1st & 2nd Berea"	44	8	52	78,441	84.62
Devonian					
Ohio Shale	134	1	135	329,458	99.26
"Big Lime"	2	2	4	5,394	50.00
Oriskany	0	2	2	9,321	0.00
Silurian					
"Newburg"	0	0	0	0	
"Clinton-Medina"	733	15	748	3,255,905	97.99
Lower Ordovician					
Rose Run	19	68	87	592,724	21.84
Cambrian					
Trempealeau	25	32	57	237,001	43.86
Precambrian	0	0	0	0	
TOTAL	966	133	1,099	4,522,053	87.90

TABLE 28.—Ohio counties¹ and their state mine number abbreviations²

County	Abbreviation	County	Abbreviation	County	Abbreviation
Adams	Ads	Hamilton	Hmn	Noble	Ne
Allen	An	Hancock	Hk	Ottawa	Oa
Ashland	Ald	Hardin	Hdn	Paulding	Pg
Ashtabula	Asa	Harrison	Hn	Perry	Fy
Athens	As	Henry	Hy	Pickaway	Pky
Auglaize	Ae	Highland	Hd	Pike	Pke
Belmont	Bt	Hocking	Hg	Portage	Pe
Brown	Bn	Holmes	Hs	Preble	Pre
Butler	Br	Huron	Hrn	Putnam	Pm
Carroll	Cl	Jackson	Jkn	Richland	Rd
Champaign	Cpn	Jefferson	Jfn	Ross	Rs
Clark	Ck	Knox	Kx	Sandusky	Sy
Clermont	Ct	Lake	Lke	Scioto	So
Clinton	Cln	Lawrence	Le	Seneca	Sa
Columbiana	Ca	Licking	Lg	Shelby	Shy
Coshocton	Cn	Logan	Lgn	Stark	Sk
Crawford	Cd	Lorain	Ln	Summit	St
Cuyahoga	Cya	Lucas	Ls	Trumbull	Tl
Darke	Dke	Madison	Mdn	Tuscarawas	Ts
Defiance	De	Mahoning	Mg	Union	Un
Delaware	Del	Marion	Mn	Van Wert	Vt
Erie	Ee	Medina	Ma	Vinton	Vn
Fairfield	Fd	Meigs	Ms	Warren	Wan
Fayette	Fe	Mercer	Mr	Washington	Wn
Franklin	Fn	Miami	Mi	Wayne	We
Fulton	Ftn	Monroe	Me	Williams	Ws
Gallia	Ga	Montgomery	My	Wood	Wd
Geauga	Gea	Morgan	Mon	Wyandot	Wt
Greene	Ge	Morrow	Mw		
Guernsey	Gy	Muskingum	Mum		

¹Fulton, Jefferson, and Madison Counties reported no production or sales of mineral commodities in 1989.²As used for Division of Mines mine numbers.

1989 OHIO ALPHABETICAL DIRECTORY OF REPORTING PRODUCING COAL-MINE OPERATORS

Name, address, telephone number, and president/owner/manager of company	Name of mine (and map location number)	County	1989 production (tons)	State mine number	Division of Reclamation permit number
Algem Coal Development Co., Inc. 110 E. Elm St. Granville, OH 43023 614-587-2330 Herbert T. Humphrey, owner	Jones Pit (531)	Coshocton	54,646	Cn-A ¹	D-0831
Anthony Mining Co., Inc. P.O. Box 1298 Steubenville, OH 43952 614-282-7811 Joseph J. Sperlazza, pres.	Pipo #51 (189) Maine 307 (190) <i>Total mines: 2</i>	Jefferson Jefferson <i>Total tons:</i>	84,560 88,531 173,091	Jfn-788 Jfn-789	D-0327 D-0307
Avis Coal Co. P.O. Box 3373 Zanesville, OH 43702-3373 614-454-2583 James F. Graham, pres.	Avis Coal Co. (383)	Athens	151,021	As-A ¹	D-0557
B. & D. Coal, Inc. P.O. Box 134 Hamden, OH 45634 614-384-3404 Jerald B. Eberts, pres.	B. & D. Coal #1 (298) B. & D. Coal #1 (563) B. & D. Coal #1 (564) <i>Total mines: 3</i>	Vinton Vinton Vinton <i>Total tons:</i>	30,722 12,865 22,077 65,664	Vn-623 Vn-B ¹ Vn-BD ¹	D-0294 D-0836 D-0207
B & N Coal, Inc. P.O. Box 100 Dexter City, OH 45727 614-783-3575 Gilbert Baker, pres.	Guiler (231) Magazine (494) Shevlin (495) Shilling (493) Ullman (514) Wagner, Lincoln (304) <i>Total mines: 6</i>	Noble Noble Noble Noble Noble, Washington Washington <i>Total tons:</i>	258,860 49,809 78,223 145,395 75,811 20,755 628,853	Ne-146 Ne-149 Ne-150 Ne-1008 Ne-151 Wn-1005	D-0343 D-0785, D-0786 D-0787 D-0706 D-0807 D-0183, D-0511
Beaver Creek, Inc. 7219 Salem-Unity Rd. Salem, OH 44460 216-336-3534 Delyte DeYarmon, pres.	Beaver Creek, Inc. (392)	Columbiana	2,385	Ca-855	IM-891
Belville Mining Co., Inc. P.O. Box 834 Ironton, OH 45638 614-643-2331 Thomas J. Belville, pres.	Brady Creek (491)	Lawrence	2,144	Le-450	D-0746
Benedict, Inc. P.O. Box 315 McArthur, OH 45651 614-596-5226 W. E. Engle, pres.	Mitchell Hollow (357) Waldron Pit (419) Allied West (420) Austin Pit (423) <i>Total mines: 4</i>	Vinton Vinton Vinton Vinton <i>Total tons:</i>	1,404 36,328 95,476 63,547 196,755	Vn-172 Vn-183 Vn-184 Vn-187	D-0445 D-0633 D-0609 D-0672
Bennoc, Inc. P.O. Box 208 Morristown, OH 43759 614-782-1330 Larry Conway, pres.	Mario's Pit (516)	Belmont	14,185	Bt-1176	D-0809
Black Rock, Ltd. P.O. Box 4513 Zanesville, OH 43702-4513 614-454-6863 Thomas F. Sands, pres.	Black Rock, Ltd. (492) (u) ²	Muskingum	32,562	Mum-268	D-0254
Blum Coal Co. Scio-Carrollton Rd. P.O. Box 232 Carrollton, OH 44615-0232 216-627-2670 Raymond Blum, owner	Pickens Job (71) Wilson Job (527) DeAngelo Pit (321) Jackson-Strabula Job (470) Minick Job (471) <i>Total mines: 5</i>	Carroll Carroll Columbiana Columbiana Columbiana <i>Total tons:</i>	1,788 1,788 16,782 10,596 18,396 49,350	Cl-231 Cl-245 Ca-938 Ca-944 Ca-950	D-0530 D-0848 IM-937 IM-951 D-0768
Boich Mining Co. P.O. Box 148 Bloomingdale, OH 43910 614-733-7311 Abe Bryan, pres.	Boich Mining Co. (178)	Jefferson	258,768	Jfn-528	D-0247, D-0563, D-0665
David Boyle, Inc. 2020 Airport Rd. New Lexington, OH 43764 614-342-2059 David R. Boyle, pres.	No. 1 Strip (330)	Hocking	12,313	Hg-321	D-0531

¹No mine number has been assigned by the Division of Mines.²(u) indicates underground mine.

1989 OHIO ALPHABETICAL DIRECTORY OF REPORTING PRODUCING COAL-MINE OPERATORS—Continued

Name, address, telephone number, and president/owner/manager of company	Name of mine (and map location number)	County	1989 production (tons)	State mine number	Division of Reclamation permit number
Buckeye-Industrial Mining Co. P.O. Box 389 Lisbon, OH 44432 216-337-9511 John C. Grisham, pres.	Jones (67) Myers (447) Greer (466) R & T (467) Ohio WV/Sheridan Mine (435) (u) ³ Witherow (474) Mountain Spring Coal Co. #6 (529) (u) ³ Roberts (366) Dobransky (407) <i>Total mines: 9</i>	Carroll Carroll Carroll Carroll Columbiana Columbiana Columbiana Stark Stark <i>Total tons:</i>	4,221 331,254 6,025 98,257 462,337 73,657 136,467 62,633 19,766 <i>1,194,617</i>	Cl-225 Cl-238 Cl-242 Cl-243 Ca-963 Ca-965 Ca-978 Sk-236 Sk-237	D-0437 D-0703 D-0751 D-0805 D-0532 D-0591 D-0874 D-0632 D-0653
Buckingham Mining & Reclamation P.O. Box 43 Crooksville, OH 43731 614-347-4721 Gary L. Allen, pres.	Drakes (497)	Perry	147,906	Py-340	D-0783
C. K. & K., Inc. Rte. 4 Box 4600 New Philadelphia, OH 44663 614-922-0797 Ronald M. Garrett, pres.	C. K. & K., Inc. #1 (351) C. K. & K., Inc. #2 (434) <i>Total mines: 2</i>	Tuscarawas Tuscarawas <i>Total tons:</i>	29,700 27,804 <i>57,504</i>	Ts-1974 Ts-1993	D-0580, D-0790 D-0709
C. L. A. Coal Co. County Rd. 37 Dennison, OH 44621 614-922-3942 Kenneth E. Brown, pres.	Dunglen (543)	Jefferson	29,594	Jfn-816	D-0825
Center Mining Co. 6950 State Rte. 164 Lisbon, OH 44432 216-424-3938 Robert Ullom & Richard Morlan, partners	C. Ullom (431)	Columbiana	5,636	Ca-961	D-0697
Central Ohio Coal Co. P.O. Box 98 Cumberland, OH 43732 614-962-2013 J. E. Katlic, exec. v. pres.	Muskingum Mine (228)	Muskingum, Noble	3,366,157	Ne-41	D-0056, D-0127, D-0261, D-0455, D-0559, D-0678, D-0820, D-0839, IM-921
Coalbrook Mining, Inc. 42891 Kelly Park Rd. Columbiana, OH 44408 216-482-2365 Wilmer A. Davis, pres.	Carle & Oyster (396)	Columbiana	10,588	Ca-962	D-0658
Commercial Minerals, Inc. 10900 South Ave. P.O. Box 217 North Lima, OH 44452-0217 216-424-1463 W. T. Mackall, pres.	West Point (98) Lisbon (472) <i>Total mines: 2</i>	Columbiana Columbiana <i>Total tons:</i>	126,937 70,200 <i>197,137</i>	Ca-919 Ca-951	D-0048, D-0412 D-0741
Consolidation Coal Co. Eastern Region Cadiz, OH 43907 614-458-1381 Ben Statler, v. pres.	Franklin 125 (137) (u) ³ Mahoning Valley 36 (150) <i>Total mines: 2</i>	Belmont, Harrison Harrison <i>Total tons:</i>	487,811 427,994 <i>915,805</i>	Hn-203 Hn-700	D-0174, D-0323 D-0018, D-0030, D-0051, D-0054, D-0334, D-0414, D-0452, D-0784, D-0826
Cravat Coal Co. 40580 Cadiz-Piedmont Rd. Cadiz, OH 43907 614-942-4656 Anthony Puskarich, pres.	Kriechbaum Pit (4) 2400 #1 (525) Sandy Ridge Pit (47) Hendrysburg West (52) Barnesville Pit (309) Neffs Pit (429) Shep-Can Pit (480) Bloomfield Pit (549) <i>Total mines: 8</i>	Belmont Belmont Belmont Belmont Belmont Belmont Harrison Muskingum <i>Total tons:</i>	27,087 44,592 29,836 81,423 3,029 8,161 37,356 17,780 <i>249,264</i>	Bt-78 Bt-146 Bt-1118 Bt-1131 Bt-1143 Bt-1160 Hn-233 Mum-244	IM-733 D-0267 D-0396 D-0507 D-0573 D-0645 D-0752 D-0388
Crooksville Coal Co., Inc. P.O. Box 149 Crooksville, OH 43731 614-982-6651 Ralph L. Allen, pres.	Crooksville Strip (239) Crooksville Coal Co., Inc. (552) <i>Total mines: 2</i>	Perry Perry <i>Total tons:</i>	235,708 23,945 <i>259,653</i>	Py-317 Py-335	D-0057, D-0085, D-0189 D-0615
D. & D. Mining Co. 3379 E. Garfield Rd. New Springfield, OH 44443 216-549-3127 Donald Thompson, pres.	Saviers Mine (441)	Columbiana	96,357	Ca-348	IM-976
D & L Contractors, Inc. P.O. Box 446 Flushing, OH 43977 614-968-4913 Walter Dombroski, pres.	D & L Strip (185)	Jefferson	77,106	Jfn-780	D-0126

³(u) indicates underground mine.

1989 OHIO ALPHABETICAL DIRECTORY OF REPORTING PRODUCING COAL-MINE OPERATORS—Continued

Name, address, telephone number, and president/owner/manager of company	Name of mine (and map location number)	County	1989 production (tons)	State mine number	Division of Reclamation permit number
Daron Coal Co., Inc. Rte. 1 Box 167 Dennison, OH 44621 614-922-6829 Ronald Selway, pres.	Pleasant Valley Mine (433)	Tuscarawas	268,387	Ts-1991	D-0702
ENZ, Inc. Rte. 1 Box 444 Dover, OH 44622 216-364-8621 Michael J. Nugo, pres.	Sickafoose Pit (246)	Stark	63,014	Sk-208	D-0295
East Fairfield Coal Co. 10900 South Ave. P.O. Box 217 North Lima, OH 44452-0217 216-549-2165 R. E. Mackall, pres.	"M" Mine (475) "HP" Mine (211) <i>Total mines: 2</i>	Columbiana Mahoning	106,375 193,397 <i>Total tons: 299,772</i>	Ca-968 Mg-626	D-0760 D-0468
East Ohio Limestone Co. P.O. Box 699 Hartsville, OH 44632 216-877-2636 Donald D. Phillips, partner	East Ohio Limestone Co. (255)	Stark	18,860	Sk-663	IM-5
Eberhart Coal, Inc. Rte. 2 Box 32 Dover, OH 44622 216-343-5677 Phillip H. Eberhart, pres.	Eberhart #2 Hott Strip (259) Eberhart #2 Hott Strip (270) Eberhart #2 Hott Strip (403) Eberhart #2 Hott Strip (503) <i>Total mines: 4</i>	Tuscarawas Tuscarawas Tuscarawas Tuscarawas	546 13,735 24,746 36,335 <i>Total tons: 75,362</i>	Ts-1526 Ts-1919 Ts-1992 Ts-1998	D-0330 D-0075 D-0685 D-0735
R. A. Eberts Co., Inc. P.O. Box 191 Jackson, OH 45640 614-286-2975 Phil A. Bowman, William R. Parks, and T. L. Darlington, Jr., owners	McArthur Pit (294) Green Strip II (418) Stewart (422) <i>Total mines: 3</i>	Vinton Vinton Vinton	188,943 129,064 8,296 <i>Total tons: 326,303</i>	Vn-163 Vn-182 Vn-186	D-0210 D-0631 D-0638
Elk Coal, Inc. P.O. Box 165 McArthur, OH 45651 614-596-2132 John L. Cline, pres.	Bowling Strip (171) Bowling Strip (540) <i>Total mines: 2</i>	Jackson Jackson	29,046 30,849 <i>Total tons: 59,895</i>	Jkn-576 Jkn-E ⁴	D-0204 D-0695
Empire Coal Co. P.O. Box 729 Gnadenhuetten, OH 44629 614-254-4395 John C. Wilson, pres.	Anco Mining (534) Empire Coal Co. (256) Hopkins-Myers (409) Anco Strip (291) Dichler-Riggle (292) <i>Total mines: 5</i>	Guernsey Tuscarawas Tuscarawas Tuscarawas Tuscarawas	20,078 268,601 2,497 33,838 73,499 <i>Total tons: 398,513</i>	Gy-310 Ts-115 Ts-1949 Ts-1963 Ts-1964	D-0842 D-0190, D-0217, D-0398, D-0715 D-0394 D-0512 D-0516
F. & M. Coal Co. Costonia Rd. Box 171 Toronto, OH 43964 614-544-5203 Edward Fiala, owner	F. & M. Strip (186)	Jefferson	16,590	Jfn-784	D-0728
Fairpoint Coal Co. P.O. Box 158 Fairpoint, OH 43927 614-695-3174 Louie Zaccagnini, pres.	Mel-Worth (19) Schoolhouse (520) <i>Total mines: 2</i>	Belmont Belmont	21,995 5,139 <i>Total tons: 27,134</i>	Bt-927 Bt-1180	D-0483 D-0847
G & M Mineral Co. P.O. Box 345 Berlin, OH 44610 216-893-2721 Walter Gary, pres.	G & M Mineral Co. (445)	Coshocton	14,502	Cn-823	D-0714
John Glenn Mining 6556 State Rte. 45 Lisbon, OH 44432 216-424-5945 John Glenn, pres.	Dawson (473)	Columbiana	29,886	Ca-952	D-0764
Hillcrest Coal, Ltd. 190 S. Main St. Magnolia, OH 44643 216-866-9388 Kermit & Richard James, Jr., partners	Hillcrest Coal, Ltd. (250)	Stark	5,583	Sk-221	D-0380
Hocking Valley Mining 36806 Maysville-Greendale Rd. Logan, OH 43138 614-385-6267 Kevin J. Boyle, pres.	Hocking Valley Mining (483)	Hocking	27,843	Hg-324	D-0754

⁴No mine number has been assigned by the Division of Mines.

1989 OHIO ALPHABETICAL DIRECTORY OF REPORTING PRODUCING COAL-MINE OPERATORS—Continued

Name, address, telephone number, and president/owner/manager of company	Name of mine (and map location number)	County	1989 production (tons)	State mine number	Division of Reclamation permit number
Holmes Limestone Co. P.O. Box 295 Berlin, OH 44610 216-803-2721 E. E. Mullet, pres.	Clark/557 (538, 565) 241 Plant (161) Wayne Mines (162) Charm (164) Farmerstown (485) Bolivar Mine (363) Dennison (502) <i>Total mines: 7</i>	Coshocton, Holmes Holmes Holmes, Wayne Holmes Holmes Stark Tuscarawas	195,714 13,838 68,417 162,582 54,071 8,196 155,281 <i>Total tons: 658,099</i>	Hs-97 Hs-67 Hs-79 Hs-86 Hs-92 Sk-235 Ts-1997	D-0775, D-0589 IM-768 IM-656, D-0429 D-0193, D-0508 D-0624 IM-945 D-0651
Horizon Coal Corp. 11415 Erie Ave. SW P.O. Box 618 Beach City, OH 44608 216-756-2414 Merle Mullet, pres.	Whitacre-Greer (468) Johnson (501) Johnson (561) <i>Total mines: 3</i>	Carroll Tuscarawas Tuscarawas	98,734 78,526 15,328 <i>Total tons: 192,588</i>	Cl-H ⁵ Ts-1995 Ts-J ⁵	D-0791 D-0718 D-0837
Huberta Coal Co. Box 728 Steubenville, OH 43952 614-282-5301 Teresa C. Schiappa, pres.	Rose Valley-587 (326)	Harrison	64,297	Hn-222	D-0587
J D Mining, Inc. Rte. 4 Box 4113 New Philadelphia, OH 44663 216-339-4900 John R. Demuth, pres.	Lorenz Pit (553) Barnhill Pit (505) Swartz Pit (554) Craig Pit (562) <i>Total mines: 4</i>	Tuscarawas Tuscarawas Tuscarawas Tuscarawas	37,561 16,282 14,514 8,736 <i>Total tons: 77,093</i>	Ts-198 Ts-2000 Ts-2004 Ts-JD ⁵	D-0824 D-0744 D-0812 D-0858
J & W Mining Co. 58490 Mt. Victory Rd. Jacobsburg, OH 43933 614-795-4013 William E. Ramsey, owner	J & W Mining Co. (515)	Belmont	3,635	Bt-1134	D-0496
James Bros. Coal Co. 190 S. Main St. P.O. Box 425 Magnolia, OH 44643 216-866-9388 Kermit & Richard James, Jr., partners	James Bros. Coal Co. (59) James Bros. Coal Co. (61) <i>Total mines: 2</i>	Carroll Carroll	18,766 61,051 <i>Total tons: 79,817</i>	Cl-17 Cl-162	D-0282 D-0408
Jeffco Sales & Mining Co. 44301 Y & O Rd. Wellsville, OH 43968 216-532-1453 Frank T. Salonica, pres.	Y & O Rd. Mine (395)	Columbiana	20,585	Ca-949	D-0625
Johnson Mining Co. 39150 Churchill Rd. Lisbon, OH 44432 216-424-3742 Robert A. Johnson, owner	Deep Mine #1 (361) (u) ⁶	Columbiana	8,990	Ca-922	D-0005, D-0565
Joyce Coal Co., Inc. P.O. Box 264 St. Clairsville, OH 43950 614-782-1330 Andy Massamino, pres.	Yudas (454) Haas (524) <i>Total mines: 2</i>	Belmont Belmont	49,436 26,668 <i>Total tons: 76,104</i>	Bt-1166 Bt-1184	D-0750 D-0799
K.C.C.I. P.O. Box 24 Morristown, OH 43759 614-782-1087 George Krulock, pres.	Coleman Pit (51) Susie Tipple (519) <i>Total mines: 2</i>	Belmont Belmont	8,653 18,701 <i>Total tons: 27,354</i>	Bt-1130 Bt-1179	D-0465 D-0840
K D Coal Co., Inc. 3379 E. Garfield Rd. New Springfield, OH 44443 216-549-3979 Kevin E. Thompson, pres.	Benner Mine (369)	Columbiana	7,209	Ca-945	IM-958
Kelly Coal Co. P.O. Box 89 Elkton, OH 44415 216-424-9654 Glenn O. Kelly, pres.	Burt Pit (528) Morris Pit (530) <i>Total mines: 2</i>	Columbiana Columbiana	5,048 706 <i>Total tons: 5,754</i>	Ca-972 Ca-K ⁵	D-0821 D-0390
Kimble Clay & Limestone Co. Rte. 1 Box 386 Dover, OH 44622 216-343-1226 Floyd E. Kimble, owner	Kimble Clay & Limestone Co. (262) Kimble Clay & Limestone Co. (412) Kimble Clay & Limestone Co. (415) Kimble Clay & Limestone Co. (416) Kimble Clay & Limestone Co. (509) <i>Total mines: 5</i>	Tuscarawas Tuscarawas Tuscarawas Tuscarawas Tuscarawas	36,521 30,242 63,507 87,888 13,486 <i>Total tons: 231,644</i>	Ts-1727 Ts-1987 Ts-K1 ⁵ Ts-K2 ⁵ Ts-K3 ⁵	IM-9 D-0667 D-0203 D-0413 D-0729

⁵No mine number has been assigned by the Division of Mines.⁶(u) indicates underground mine.

1989 OHIO ALPHABETICAL DIRECTORY OF REPORTING PRODUCING COAL-MINE OPERATORS—Continued

Name, address, telephone number, and president/owner/manager of company	Name of mine (and map location number)	County	1989 production (tons)	State mine number	Division of Reclamation permit number
King Quarries, Inc. P.O. Box 72 Caldwell, OH 43724 614-732-4185 David King, pres.	King Strip (217) Nau (551) <i>Total mines: 2</i>	Muskingum Noble <i>Total tons:</i>	19,100 7,500 26,600	Mum-237 Ne-152	D-0269 D-0859
Kohl Industries Rte. 1 Box 1083 New Philadelphia, OH 44663 216-874-4748 Jerry K. Kohl, owner	Black Hawk (248)	Stark	9,421	Sk-217	IM-750
L & M Minerals Co. Star Rte. P.O. Box 54 Millersburg, OH 44654 216-893-2227 E. E. Mullet, pres.	Evans (264) Luikert (267) Romig (276) Spring (411) <i>Total mines: 4</i>	Tuscarawas Tuscarawas Tuscarawas Tuscarawas <i>Total tons:</i>	12,176 37,413 6,314 2,886 58,789	Ts-1884 Ts-1914 Ts-1930 Ts-1982	IM-6 D-0701 D-0482 IM-621
LaMay Industries, Inc. Box 626 Jackson, OH 45640 614-682-7787 Phil A. Bowman, William R. Parks, and T. L. Darlington, Jr., owners	LaMay-Gilmore (175)	Jackson	259,167	Jkn-1054	D-0205
Lisbon Coal Crushers, Inc. 37544 Hunters Camp Rd. P.O. Box 492 Lisbon, OH 44432 216-424-9559 William T. Lewis, pres.	Rogers (469)	Columbiana	13,185	Ca-929	D-0730
Red Malcuit, Inc. 707 S. Wooster Ave. P.O. Box 166 Strasburg, OH 44680-0166 216-878-7114 Mark A. Malcuit, pres.	RMI #1 (269) RMI #2 (510) <i>Total mines: 2</i>	Tuscarawas Tuscarawas <i>Total tons:</i>	95,561 36,005 131,566	Ts-1918 Ts-2007	D-0236 D-0737
Marietta Coal Co. 67705 Friends Church Rd. St. Clairsville, OH 43950 614-695-2197 George Nicolozakes, pres.	Borovich-Neitzelt-Suter-Seaway (13) Barack-Henthorne et al. (38) Seabright-Bigley-Taylor (39) Consol (42) Oliver-Clark et al. (58) Lude (53) Baltimore Coal-Presutti (424) North American-Thornton (450) Denham-Albaugh-Carey (452) Shaw (517) Harrison Leasing (523) <i>Total mines: 11</i>	Belmont Belmont Belmont Belmont Belmont Belmont Belmont Belmont Belmont Belmont Belmont <i>Total tons:</i>	68,180 122,095 59,831 214,052 1,706 22,923 7,525 41,219 105,538 35,432 13,769 692,270	Bt-147 Bt-1104 Bt-1105 Bt-1109 Bt-1129 Bt-1132 Bt-1150 Bt-1162 Bt-1164 Bt-1177 Bt-1183	D-0022 D-0088 D-0333 D-0270 D-0491 D-0515 D-0597 D-0720 D-0742 D-0776 D-0845
McArthur Lumber & Post Co., Inc. State Rte. 93 McArthur, OH 45651 614-596-5880 Larry D. Murdock, v. pres.	McArthur Lumber & Post Co., Inc. (512)	Vinton	2,687	Vn-189	D-0766
Miller Mining, Inc. Rte. 2 Box 254 Sugarcreek, OH 44681 216-852-4511 Raymond O. Miller, pres.	Garber Pit (479) Trail Pit (426) Schindler-Fondriest (499) Shrock-Miller (414) Shrock-Hostetler (506) Troyer-Gordon (557) Bose (558) Mast-Miller-Widder (559) <i>Total mines: 8</i>	Coshocton Holmes Tuscarawas Tuscarawas Tuscarawas Tuscarawas Tuscarawas Tuscarawas <i>Total tons:</i>	35,638 49,052 77,272 24,031 57,962 18,956 8,183 30,658 301,752	Cn-826 Hs-94 Ts-197 Ts-1990 Ts-2002 Ts-2008 Ts-2009 Ts-2010	D-0770 D-0699 D-0802 D-0654 D-0779 D-0833 D-0811 D-0849
Milton Mining Co., Inc. P.O. Box 548 Jackson, OH 45640 614-682-7787 Keith Bowman, pres.	Greasy #1 (167) (u) ⁷	Jackson	36,017	Jkn-548	D-0368
Myers Mining P.O. Box 218 Carrollton, OH 44615 216-627-7599 James L. Myers, owner	Carrollton Mine (464) Harlem Pit (465) <i>Total mines: 2</i>	Carroll Carroll <i>Total tons:</i>	28,437 36,866 65,303	Cl-240 Cl-241	D-0755 D-0782

⁷(u) indicates underground mine.

1989 OHIO ALPHABETICAL DIRECTORY OF REPORTING PRODUCING COAL-MINE OPERATORS—Continued

Name, address, telephone number, and president/owner/manager of company	Name of mine (and map location number)	County	1989 production (tons)	State mine number	Division of Reclamation permit number
Carl Noble & Son, Inc. P.O. Box 25 Harlem Springs, OH 44631 216-739-3311 Larry Noble, pres.	Noble Strip (427)	Carroll	11,694	Cl-237	D-0710
Ohio Coal & Construction Corp. P.O. Box 2388 Wintersville, OH 43952 614-264-7704 Richard Delatore, pres.	No. 38 Strip-Bianco (370) No. 38 Strip-Goff (387) No. 38 Strip-Riddle (459) No. 30 Strip-Heik (197) No. 36 Strip-Friendship Park (337) No. 36 Strip-Greentown (401) No. 36 Strip-Kackley (542) <i>Total mines: 7</i>	Belmont Belmont Belmont Jefferson Jefferson Jefferson Jefferson	2,457 23,562 21,582 5,025 134,650 31,257 10,847 <i>Total tons: 229,380</i>	Bt-1149 Bt-1155 Bt-1173 Jfn-801 Jfn-804 Jfn-807 Jfn-814	D-0411 D-0637 D-0675 D-0525 D-0564 D-0642 D-0180
Ohio Edison Co. 76 S. Main St. Akron, OH 44308 216-384-5298 Justin T. Rogers, Jr., pres.	Ohio Edison Co. Strip Mine (193)	Jefferson	177,441	Jfn-1267	D-0167
Ohio River Collieries, Inc. P.O. Box 128 Bannock, OH 43972 614-968-3504 Tony Gentile, pres.	Black Oak (391) Negus Strip (25) 7400 Pit (27) Saffell (36) <i>Total mines: 4</i>	Belmont Belmont Belmont Belmont	117,102 64,525 79,311 37,589 <i>Total tons: 298,527</i>	Bt-948 Bt-992 Bt-1074 Bt-1102	D-0348 D-0305 D-0340 D-0340
Ohio Valley Coal Co. 56854 Pleasant Ridge Rd. Alledonia, OH 43902 216-765-1240 Robert E. Murray, pres.	Powhatan #6 (3) (u) ^a	Belmont	1,685,800	Bt-68	D-0360
Peabody Coal Co. 1951 Barrett Ct. P.O. Box 1990 Henderson, KY 42420 502-827-0800 Howard W. Williams, pres.	Simco Mine (112) Sunnyhill #9 South (235) (u) ^a <i>Total mines: 2</i>	Coshocton Perry	598,568 1,128,597 <i>Total tons: 1,727,165</i>	Cn-799 Py-265	D-0023, D-0668 D-0324
Puskarich Limestone Co. 40580 Cadiz-Piedmont Rd. Cadiz, OH 43907 614-942-4656 Anthony Puskarich, pres.	Harlem Springs Pit (62)	Carroll	8,699	Cl-183	IM-7
Puskarich Mining, Inc. 40580 Cadiz-Piedmont Rd. Cadiz, OH 43907 614-942-4656 Anthony Puskarich, pres.	New Cumberland Pit (268)	Tuscarawas	45,788	Ts-1917	D-0293
Quality Coal Co. Rte. 1 Cheshire, OH 45620 614-992-6637 Jay Hall, Jr., pres.	Buckeye Furnace (379) Church (359) Rte. 50 Pit (511) Sentry (301) <i>Total mines: 4</i>	Jackson Vinton Vinton Vinton	205,348 157,299 231,448 68,398 <i>Total tons: 662,493</i>	Jkn-1061 Vn-181 Vn-188 Vn-655	D-0627 D-0219 D-0761 D-0004
Quarto Mining Co. Subsidiary of Consolidation Coal Co. 1029 Market St. P.O. Box 231 Clarington, OH 43915 614-458-1381 Ben Statler, v. pres.	Powhatan #4 (215) (u) ^a	Monroe	1,980,914	Me-4	D-0422, D-0433
R. & E. Coal Co. 8693 Bender St. Navarre, OH 44662 216-879-5864 Rafael F. Colucy, pres.	R. & E. Coal Co. (556)	Tuscarawas	5,875	Ts-2006	D-0800
R & F. Coal Co. 538 North Main St. P.O. Box 247 Cadiz, OH 43907 614-942-2186 Jack Cox, pres.	Loy-McFarland (30) MacMillan-Shephard (308) Yoe-Kemp (312) Egypt Valley East (313) Meigs-Phillips (456) Fodor-Fulton (457) ^a Duncan (458) Miller (460) Moore-Iddings (518) Dunlap-Harlan (521) American Legion (522) Bartolec (123) Wentz-Green (122)	Belmont Belmont Belmont Belmont Belmont Belmont Belmont Belmont Belmont Belmont Coshocton Coshocton	58,599 18,682 38,270 50,215 242,968 134,115 148,878 475,416 67,910 42,105 38,927 173,435 14,107	Bt-1095 Bt-1139 Bt-1148 Bt-1154 Bt-1168 Bt-1169 Bt-1170 Bt-1175 Bt-1178 Bt-1181 Bt-1182 Cn-779 Cn-814	D-0096 D-0452 D-0553 D-0510 D-0619 D-0684 D-0789 D-0338 D-0757 D-0846 D-0854 D-0320 D-0489

^a(u) indicates underground mine.

1989 OHIO ALPHABETICAL DIRECTORY OF REPORTING PRODUCING COAL-MINE OPERATORS—Continued

Name, address, telephone number, and president/owner/manager of company	Name of mine (and map location number)	County	1989 production (tons)	State mine number	Division of Reclamation permit number
R & F Coal Co. (continued)	Taylor (398) Downing 36 (477) Hathaway-Isleta (442) Porcher Area (532) Watson-Huhn (314) Lamborn (147) Reppart (327) Tasa (399) Duncanwood (443) Calvin-Mickey (481) Lamborn South (482) Mihelios-Pruneski (153) Matusek-Heil (155) Myers North (537) Varkony-Polen (183) Cochran-Swad (336) Arrowhead (544) Polen II (545) Long-LaFever (550) Flood-Cline (234) Furbay-Beem (352) Metcalf Strip (507) DeLong-Wilsterman (508) <i>Total mines: 36</i>	Coshocton Coshocton Coshocton Coshocton Guernsey Harrison Harrison Harrison, Jefferson Harrison Harrison Harrison Harrison Harrison Harrison Jefferson Jefferson Jefferson Noble Noble Tuscarawas Tuscarawas Tuscarawas	14,728 369,307 514,904 146 14,630 115,288 157,745 198,850 427,044 63,528 227,967 111,532 156,344 4,393 357,724 954 6,709 5,570 56,997 137,765 1,185 1,455 90,007 <i>Total tons: 4,538,399</i>	Cn-820 Cn-824 Cn-HI ^a Cn-PA ^a Gy-304 Hn-218 Hn-223 Hn-225 Hn-227 Hn-234 Hn-236 Hn-739 Hn-M ^a Hn-MN ^a Jfn-720 Jfn-802 Jfn-817 Jfn-P2 ^a Ne-147 Ne-FC ^a Ts-1978 Ts-2003 Ts-DW ^a	D-0623 D-0679 D-0673 D-0850 D-0262 D-0436 D-0552 D-0593 D-0681 D-0614 D-0436 D-0119 D-0476 D-0772 D-0158 D-0500 D-0860 D-0798 D-0453 D-0458 D-0582 D-0644 D-0792
R & R Minerals, Inc. T.R. 319, 7360 Skyview Rd. Millersburg, OH 44654 216-674-4926 Gary R. Ross, pres.	Orange Pit (444)	Coshocton	21,504	Cn-822	D-0708
R & S Coal Co., Inc. Rte. 1 Box 229 Hamden, OH 45634 614-384-5282 Stephen R. Eberts, owner	R & S Strip (295)	Vinton	21,848	Vn-173	D-0719
R. T. G., Inc. P.O. Box 250 Byesville, OH 43723 614-685-8383 James E. Rossiter, pres.	R. T. G. #5 (323)	Guernsey	104,357	Gy-305	D-0578
Regal Mining, Inc. 3333 Perron Rd. SE Carrollton, OH 44615 216-739-6596 Charles L. Smith, pres.	Camp Ecco (360) Buckeye (463) Selway (526) <i>Total mines: 3</i>	Carroll Carroll Carroll	54,056 27,536 3,925 <i>Total tons: 85,517</i>	Cl-233 Cl-239 Cl-244	D-0628 D-0749 D-0814
James A. Rogers P.O. Box 27 Hanoverton, OH 44623 216-223-2153 James A. Rogers, owner	Rogers #1 (535)	Harrison	9,643	Hn-237	D-0620
Royal Oak Industries, Inc. P.O. Box 626 Jackson, OH 45640 614-682-7787 Phil A. Bowman, William R. Parks, and T. L. Darlington, Jr., owners	Global (488)	Jackson	19,865	Jkn-566	IM-871
S. & D. Construction Corp. Rte. 1 Toronto, OH 43964 614-544-5616 M. J. Rankin, pres.	Rankin Mine (196)	Jefferson	35,387	Jfn-797	D-0469
Saginaw Mining Co. 1100 Superior Ave. P.O. Box 6508 Cleveland, OH 44114-2598 216-861-3300 R. D. Thompson, pres.	Saginaw Mine (16) (u) ¹⁰	Belmont	415,081	Bt-643	D-0328
Sands Hill Coal Co., Inc. 1203 N. Pennsylvania Ave. Wellston, OH 45692 614-384-5659 Jack Huffman, pres.	Sands Hill Strip #2 (176) Sands Hill Strip #4 (541) Sands Hill Strip #1 (299) Sands Hill Strip #3 (513) <i>Total mines: 4</i>	Jackson Jackson, Vinton Vinton Vinton	80,277 49,252 210,925 170,803 <i>Total tons: 511,257</i>	Jkn-1055 Jkn-SH ^a Vn-641 Vn-S ^a	D-0347 D-0861 D-0309 D-0793

^aNo mine number has been assigned by the Division of Mines.¹⁰(u) indicates underground mine.

1989 OHIO ALPHABETICAL DIRECTORY OF REPORTING PRODUCING COAL-MINE OPERATORS—Continued

Name, address, telephone number, and president/owner/manager of company	Name of mine (and map location number)	County	1989 production (tons)	State mine number	Division of Reclamation permit number
Sands Mining Corp. 3445 Adamsville Rd. P.O. Box 2848 Zanesville, OH 43701 614-454-1483 Gene Sands, pres.	Sands Mining Corp. (548)	Muskingum	77,759	Mum-239	D-0428
Schiappa Coal Co., Inc. P.O. Box 728 Steubenville, OH 43952 614-282-5301 Teresa C. Schiappa, pres.	Smith 487 (195)	Jefferson	15,815	Jfn-795	D-0487
Southern Ohio Coal Co. P.O. Box 490 Athens, OH 45701 614-286-5051 J. E. Katlic, exec. v. pres.	Meigs Mine #1 (212) (u) ^{11,12} Meigs Mine #2 (213) (u) ¹¹ Raccoon Mine #3 (300) (u) ^{11,12} <i>Total mines: 3</i>	Meigs Meigs Vinton	814,594 2,919,562 724,093 <i>Total tons: 4,458,249</i>	Ms-293 Ms-294 Vn-652	D-0354 D-0355 D-0463
Stewart Coal Co. Lake Alma Rd. Wellston, OH 45692 614-286-4696 William F. Stewart, pres.	Stewart Mine (172) White Pit (539) <i>Total mines: 2</i>	Jackson Jackson	18,504 43,265 <i>Total tons: 61,769</i>	Jkn-561 Jkn-1064	D-0239 D-0732
Sugarcreek Clay & Limestone, Inc. P.O. Box 402 Sugarcreek, OH 44681 216-852-4440 Daniel O. Miller, pres.	Coshocton Strip (478) Hershberger Strip (487) <i>Total mines: 2</i>	Coshocton Holmes	9,670 11,380 <i>Total tons: 21,050</i>	Cn-825 Hs-825	D-0758 D-0529
Sunnydale Mining Co. 88740 Fairview Rd. Jewett, OH 43986 614-946-4291 Robert Stewart, owner	Jolly Mining (536)	Harrison	4,390	Hn-747	D-0835
Thompson Bros. Mining Co. 3379 E. Garfield Rd. New Springfield, OH 44443 216-549-3979 J. E. Thompson, pres.	Peres Mine (205)	Mahoning	4,762	Mg-65	D-0374
Thompson Mining Co. 12321 Ideal Rd. Byesville, OH 43723 614-685-6726 George Thompson, owner	Thompson Mining Co. (547)	Guernsey, Muskingum	5,829	Gy-308	D-0724
Tri-State Coal Sales, Inc. P.O. Box 754 New Lexington, OH 43764 614-342-4006 Steven L. Allen, pres.	Keiffer (484)	Hocking	30,609	Hg-325	D-0767
Valley Coal Corp. P.O. Box 148 Union Furnace, OH 43158 304-773-5531 Velma G. Zuspan, pres.	Darmac (158) Oliver Pit (331) <i>Total mines: 2</i>	Hocking Hocking	44,744 11,456 <i>Total tons: 56,200</i>	Hg-295 Hg-V ¹³	D-0304 D-0519, D-0832
Valley Mining, Inc. Rte. 1 Box 158B Dennison, OH 44621 614-922-3942 Kenneth E. Brown, pres.	York (489) S & C Development (354) Fouts-Edwards (417) Page (504) Heddleston (555) Lattavo (560) <i>Total mines: 6</i>	Jefferson Tuscarawas Tuscarawas Tuscarawas Tuscarawas Tuscarawas	255,251 5,191 35,205 123,311 42,430 7,127 <i>Total tons: 468,515</i>	Jfn-813 Ts-1980 Ts-1983 Ts-1999 Ts-2005 Ts-2011	D-0740 D-0604 D-0690 D-0738 D-0769 D-0822
Varkony Mining Co. R.D. 5 Cadiz, OH 43907 614-937-2777 Stephen Varkony, owner	Varkony Mining Co. (146)	Harrison	42,323	Hn-217	D-0440
W.B. Coal Co. R.D. 1 Box 40 Bloomingdale, OH 43910 614-282-6503 Wayne Boich, pres.	McGinness Bros. Strip (144)	Harrison	135,159	Hn-738	D-0376

¹¹(u) indicates underground mine.¹²Meigs Mine #1 and Raccoon Mine #3 merged in 4th quarter 1989 to form Meigs Mine #31. Production from this mine totalled 414,722 tons from Meigs and Vinton Counties. Total tonnage produced is included with the production from Ms-293 and Vn-652.¹³No mine number has been assigned by the Division of Mines.

1989 OHIO ALPHABETICAL DIRECTORY OF REPORTING PRODUCING COAL-MINE OPERATORS—Continued

Name, address, telephone number, and president/owner/manager of company	Name of mine (and map location number)	County	1989 production (tons)	State mine number	Division of Reclamation permit number
Waterloo Coal Co., Inc. P.O. Box 626 Jackson, OH 45640 614-682-7787 Phil A. Bowman, William R. Parks, and T. L. Darlington, Jr., owners	Bowman Strip (165)	Jackson	281,902	Jkn-367	IM-774, D-0273, D-0286, D-0594, D-0726
	Blackfork Pit (546) <i>Total mines: 2</i>	Lawrence	24,388 <i>Total tons: 306,290</i>	Le-451	
Weirton Construction Co. 401 Pennsylvania Ave. Weirton, WV 26062 304-748-1400 Donald R. Donell, pres.	#19 (180)	Jefferson	144,797	Jfn-687	D-0404
Wilmot Mining Co. P.O. Box 185 Wilmot, OH 44689 216-359-5411 Thomas R. Eddy, pres.	North-Malavite (498)	Stark	8,247	Sk-214	D-0759
Zimnox Coal Co. 1211 Third St. Brilliant, OH 43913 614-598-4111 Walter Zimnox, pres.	Zimnox #4 (181)	Jefferson	60,745	Jfn-703	D-0194, D-0736, D-0843
Zoar Mining Co. P.O. Box 550 Zoar, OH 44697 216-874-2434 Peter C. Johnson, pres.	Zoar Mining Co. (258)	Tuscarawas	1,984	Ts-540	IM-28



Opening to a mine in the Lower Kittanning (No. 5) coal near Coal Grove, Lawrence County. Date of photo unknown.

**1989 OHIO DIRECTORY OF REPORTING COAL-PREPARATION PLANTS
AND ASSOCIATED FACILITIES, BY COUNTY**

County	Name, address, telephone number, and president/owner/manager of company	Name of plant (and map location number for coal-preparation plants)	Township	State mine number	Division of Reclamation permit number	Type of facility
Belmont	Bannock Coal Co. 43249 Harrah St. P.O. Box 98 Lafferty, OH 43951 614-968-3582 Tony Gentile, pres.	Bannock Coal Shops	Wheeling	Bt-1127	D-0774	tipple, shops
	Consolidation Coal Co. Eastern Region Cadiz, OH 43907 614-458-1381 Ben Statler, v. pres.	General Services 105	Wheeling	Hn-5		general services
	Cravat Coal Co. 40580 Cadiz-Piedmont Rd. Cadiz, OH 43907 614-942-4656 Anthony Puskarich, pres.	Bellaire River Dock Lynn Tipple (26)	Pultney Washington, York	Bt-876 Bt-878	D-0687 D-0230	loading dock tipple, prep plant—jig, flotation
		Holloway Tipple #1	Flushing	Bt-963	D-0763	tipple
	Marietta Coal Co. 67705 Friends Church Rd. St. Clairsville, OH 43950 614-695-2197 George Nicolozakes, pres.	Marietta Coal Co. (3)	Pultney	Bt-936	D-0216	loading dock, prep plant—jig, flotation, centrifugal dryer, crushers, screens
	Ohio River Collieries, Inc. P.O. Box 128 Bannock, OH 43972 614-968-3504 Tony Gentile, pres.	Amber Tipple Lafferty Tipple Lafferty Truck Shop	Union Union Union	Bt-844 Bt-947 Bt-1093	D-0773 D-0773	tipple tipple shop
	Ohio Valley Coal Co. 56854 Pleasant Ridge Rd. Alledonia, OH 43902 216-765-1240 Robert E. Murray, pres.	Powhatan #6 (4)	Smith, Washington	Bt-68	D-0360	prep plant—jigs, cyclones, centrifuges, thickeners, filters, screens
	Quarto Mining Co. (subsidiary of Consolidation Coal Co.) 1029 Market St. P.O. Box 231 Clarington, OH 43915 614-458-1381 Ben Statler, v. pres.	Central Shop	York	Bt-1000		central shop
	R & F Coal Co. 538 North Main St. P.O. Box 247 Cadiz, OH 43907 614-942-2186 Jack Cox, pres.	Lamira Preparation Plant (1)	Smith	Bt-108		prep plant—heavy-media washers, cyclone, centrifuges, thickeners, filters, crushers, breakers, screens
		Bellaire River Terminal Rebuild Center	City of Bellaire	Bt-832 Bt-1110		dock shop
Carroll	Saginaw Mining Co. 1100 Superior Ave. P.O. Box 6508 Cleveland, OH 44114-2598 216-861-3300 R. D. Thompson, pres.	Saginaw Mine (2)	Richland	Bt-643	D-0328	prep plant—heavy-media washers, crushers, screens, picking tables, magnets
	Cravat Coal Co. 40580 Cadiz-Piedmont Rd. Cadiz, OH 43907 614-942-4656 Anthony Puskarich, pres.	Cravat Coal Tipple	Orange	Cl-C ¹	D-0707	tipple
Columbiana	Buckeye Industrial Mining Co. P.O. Box 389 Lisbon, OH 44432 216-337-9511 John Grisham, pres.	Kensington Preparation Plant (5)	West	Ca-879	D-0228	prep plant—heavy-media washer, cyclone, centrifuges, breaker
Coshocton	Conesville Coal Preparation Co. P.O. Box 222 Conesville, OH 43811 614-687-3209 J. E. Katlic, exec. v. pres.	Conesville Coal Preparation Co. (7)	Franklin	Cn-810		prep plant—jig, cyclones, froth cells, flotation, filter press, screens, dryers
	Cravat Coal Co. 40580 Cadiz-Piedmont Rd. Cadiz, OH 43907 614-942-4656 Anthony Puskarich, pres.	Coshocton Tipple	Franklin	Cn-736	D-0671	tipple

¹No mine number has been assigned by the Division of Mines.

**1989 OHIO DIRECTORY OF REPORTING COAL-PREPARATION PLANTS
AND ASSOCIATED FACILITIES, BY COUNTY—Continued**

County	Name, address, telephone number, and president/owner/manager of company	Name of plant (and map location number for coal-preparation plants)	Township	State mine number	Division of Reclamation permit number	Type of facility
Coshocton (con't)	R & F Coal Co. 538 North Main St. P.O. Box 247 Cadiz, OH 43907 614-942-2186 Jack Cox, pres.	Barb Tipple	Franklin	Cn-748	D-0661	tipple
Gallia	Conrich of Ohio, Inc. P.O. Box 59 Addison, OH 45610 614-446-7040 Lee Congleton, pres.	Conrich of Ohio, Inc.	Addison	Ga-216	D-0739	loading dock
	LaMay Industries, Inc. P.O. Box 626 Jackson, OH 45640 614-682-7787 Phil A. Bowman, William R. Parks, and T. L. Darlington, Jr., owners	LaMay River Dock	Addison	Ga-229	D-0725	dock, tipple
	Mack Energy Co. P.O. Box 148 Union Furnace, OH 43158-0148 614-385-8521 Michael McCort, pres.	River Tipple	Clay	Ga-236		dock, tipple
	Sands Hill Coal Co., Inc. 1203 N. Pennsylvania Ave. Wellston, OH 45692 614-384-5659 Jack Huffman, pres.	Sands Hill Coal Co., Inc.	Addison	Ga-183	D-0834	tipple
Harrison	Consolidation Coal Co. Eastern Region Cadiz, OH 43907 614-458-1381 Ben Statler, v. pres.	Georgetown Preparation Plant (8)	Cadiz	Hn-212	D-0192	prep plant—jigs, flotation, cyclones, centrifuges, filters, crushers, breaker, screens, dryer, picking tables, magnets
	Cravat Coal Co. 40580 Cadiz-Piedmont Rd. Cadiz, OH 43907 614-942-4656 Anthony Puskarich, pres.	22 Shop	Moorefield	Hn-230		shop
	R & F Coal Co. 538 North Main St. P.O. Box 247 Cadiz, OH 43907 614-942-2186 Jack Cox, pres.	Nitrate Plant Machine Shop/Warehouse	Short Creek Cadiz	Hn-680 Hn-709		nitrate plant shop
Hocking	Mack Energy Co. P.O. Box 148 Union Furnace, OH 43158-0148 614-385-8521 Michael McCort, pres.	Tipple	Starr	Hg-M ²	D-0556	tipple
Jackson	Sands Hill Coal Co., Inc. 1203 N. Pennsylvania Ave. Wellston, OH 45692 614-384-5659 Jack Huffman, pres.	Sands Hill Strip #2 (9)	Milton	Jkn-1055	D-0347	prep plant—heavy-media cyclone, hydrocyclones, screens, dryer, crusher, picking table, magnets
	Stewart Coal Co. Lake Alma Rd. Wellston, OH 45692 614-286-4696 William F. Stewart, pres.	Stewart Tipple	Milton	Jkn-S ²	D-0659	tipple
	Waterloo Coal Co., Inc. P.O. Box 626 Jackson, OH 45640 614-682-7787 Phil A. Bowman, William R. Parks, and T. L. Darlington, Jr., owners	Bowman Strip (10)	Jefferson, Madison	Jkn-367	D-0285	prep plant—jig, crushers, breaker, screens, dryers, wash tables
Jefferson	Ohio Coal & Construction Corp. P.O. Box 2388 Wintersville, OH 43952 614-264-7704 Richard Delatore, pres.	#40 Dock-Shop-Washer (12)	Warren	Jfn-647	D-0492	dock, shop, prep plant—heavy-media washer, cyclones, crushers, breaker, screens, dryers

²No mine number has been assigned by the Division of Mines.

**1989 OHIO DIRECTORY OF REPORTING COAL-PREPARATION PLANT
AND ASSOCIATED FACILITIES, BY COUNTY—Continued**

County	Name, address, telephone number, and president/owner/manager of company	Name of plant (and map location number for coal-preparation plants)	Township	State mine number	Division of Reclamation permit number	Type of facility
Jefferson (con't)	Route Forty-Three Washer P.O. Box 407 Richmond, OH 43944 614-282-5301 Paul Carapellotti, pres.	Route Forty-Three Washer (11)	Springfield	Jfn-1290	D-0211	prep plant—heavy-media washer
	W.B. Coal Co. R.D. 1 Box 40 Bloomington, OH 43910 614-282-6503 Wayne Boich, owner	W.B. Tipple	Wayne, Cross Creek	Jfn-744	D-0665	tipple
Lawrence	Collins Mining Co. Rte. 2 Box 48 Ironton, OH 45638 614-532-9414 O. C. Collins, owner	River Dock	Hamilton	Le-415	D-0777	dock
	Harbour Marine, Inc. P.O. Box 3126 Huntington, WV 25702-0126 614-886-8444 T. L. McKinney, v. pres., engineering	Harbour Marine, Inc.	Union	Le-420	D-0662	tipple
	Ironton Coal Co., Inc. P.O. Box 2189 Ashland, KY 41105-2189 606-928-3433 Larry Addington, pres.	Ironton Coal Co., Inc.	Upper	Le-439		loading dock
	Rail-River Terminal Co., Inc. c/o Marcoal USA P.O. Box 562 Dale, IN 47523 812-937-4536 James D. Kulbeth, pres.	Rail-River Terminal	Perry	Le-413	D-0664	dock
Mahoning	East Fairfield Coal Co. 10900 South Ave. P.O. Box 217 North Lima, OH 44452-0217 216-549-2165 R. E. Mackall, pres.	Tipple Washing Plant (13)	Beaver Beaver	Mg-621 Mg-623	D-0214	tipple prep plant—cyclones, centrifuges, thickener, filter, crushers, screens, magnets
	Thompson Bros. Mining Co. 3379 E. Garfield Rd. New Springfield, OH 44443 216-549-3979 J. E. Thompson, owner	Thompson Bros. Mining Co.	Springfield	Mg-588	D-0711	tipple
Meigs	Jaymar Coal Co. Rte. 1 Cheshire, OH 45620 614-992-6637 Jay Hall, Jr., pres.	Jaymar Tipple	Salisbury	Ms-J ³	D-0698	tipple
	Raven Hocking Coal Corp. P.O. Box 108 Mason, WV 25260 304-773-5531 Velma Zuspan, pres.	Raven Dock	Sutton	Ms-307		dock
	Southern Ohio Coal Co. P.O. Box 490 Athens, OH 45701 614-286-5051 J. E. Katlic, exec. v. pres.	Meigs Mine No. 1 (14)	Salem	Ms-293	D-0354	prep plant—heavy-media washers, flotation, cyclones, centrifuges, thickeners, filters, breaker, screens
Monroe	Quarto Mining Co. (subsidiary of Consolidation Coal Co.) 1029 Market St. P.O. Box 231 Clarington, OH 43915 614-458-1381 Ben Statler, v. pres.	Powhatan #4 (15)	Salem	Me-4	D-0422	prep plant—jigs, cyclones, centrifuges, thickeners, filters, crushers
Morgan	Central Ohio Coal Co. P.O. Box 98 Cumberland, OH 43732 614-962-2013 J. E. Katlic, exec. v. pres.	Muskingum Mine (16)	Meigsville	Ne-41	D-0420	prep plant—jigs, flotation, cyclones, thickener, filters, crushers, breakers, screens, magnets
Muskingum	King Quarries, Inc. P.O. Box 72 Caldwell, OH 43724 614-732-4185 David King, pres.	King Quarries Tipple	Washington	Mum-229	D-0363	tipple

³No mine number has been assigned by the Division of Mines.

**1989 OHIO DIRECTORY OF REPORTING COAL-PREPARATION PLANTS
AND ASSOCIATED FACILITIES, BY COUNTY—Continued**

County	Name, address, telephone number, and president/owner/manager of company	Name of plant (and map location number for coal-preparation plants)	Township	State mine number	Division of Reclamation permit number	Type of facility
Muskingum (con't)	Sands Mining Corp. 3445 Adamsville Rd. P.O. Box 2848 Zanesville, OH 43701 614-454-1483 Gene Sands, pres.	Sands Mining Coal-Preparation Plant (28)	Washington	Mum-239	D-0428	prep plant—jig, cyclones, crusher, flotation, conveyor
Perry	Crooksville Coal Co., Inc. P.O. Box 149 Crooksville, OH 43731 614-982-6651 Ralph L. Allen, pres.	Crooksville Preparation Plant (18)	Bearfield	Py-317	D-0248	prep plant—jig, flotation, centrifugal dryer, crushers, screens
	Nutter Bros. Coal Co., Inc. P.O. Box 190 New Lexington, OH 43766 614-394-2681 James P. Nutter, pres.	#1 Tipple	Monday Creek	Hg-293	D-0288	tipple
	Peabody Coal Co. 2644 Pike Twp. Rd. 217 NE New Lexington, OH 43764 502-827-0800 Howard W. Williams, pres.	Sunnyhill Preparation Plant #0297 (17)	Pike	Py-248	D-0325	prep plant—jigs, cyclones, crushers, breaker, screens, centrifuges
	Star Mining Co., Inc. 3549 Marietta Rd. SE Rte. 1 Junction City, OH 43748-9743 614-342-1440 Bruce Schwartz, pres.	Star Mining Tipple	Salt Lick	Py-339	D-0692	tipple
	Ky-Oh Transportation Co. P.O. Box 899 South Shore, KY 41175 606-932-3101 C. N. Gilmore, pres.	Ky-Oh Transportation Co.	Porter	So-96		dock
Scioto	Standard Materials, Inc. P.O. Box 184 Wheelersburg, OH 45694 216-743-3151 C. W. Kelley, asst. sec.	Wheelersburg Dock	Porter	So-92	D-0607	dock
Tuscarawas	Central Fuel Co. County Rd. 55 P.O. Box 165 New Philadelphia, OH 44663 216-339-5049 Keith B. Kimble, gen. mgr.	Central Fuel Co. (20)	York	Ts-1938	D-0381	prep plant—jig, screen, dryers
	Empire Coal Co. P.O. Box 729 Gnadenhutzen, OH 44629 614-254-4395 John C. Wilson, pres.	Empire Coal Co. (19)	Clay, Salem	Ts-115	D-0199	prep plant—jig, flotation, cyclones, filters, crushers, screens
	Horizon Coal Corp. 11415 Erie Ave. SW P.O. Box 618 Beach City, OH 44608 216-756-2414 Merle Mullet, pres.	Horizon Coal Wash Plant (21)	Franklin, Lawrence	Ts-1942	D-0287	prep plant—jigs, cyclones, centrifuges, crushers, screens, picking tables
	Miller Mining, Inc. Rte. 2 Box 254 Sugarcreek, OH 44681 216-852-4511 Raymond O. Miller, pres.	Copperhead Tipple	Sugar Creek, Wayne	Ts-MM ⁴	D-0652	tipple
Vinton	Benedict, Inc. P.O. Box 315 McArthur, OH 45651 614-596-5226 W. E. Engle, pres.	Benedict, Inc. (22)	Swan	Vn-145	D-0159	prep plant—heavy-media washer, cyclone, crusher, conveyors
	R. A. Eberts Co., Inc. P.O. Box 191 Jackson, OH 45640 614-286-2975 Phil A. Bowman, William R. Parks, and T. L. Darlington, Jr., owners	Eberts Tipple	Elk	Vn-E ⁴	D-0472	tipple

⁴No mine number has been assigned by the Division of Mines.

**1989 OHIO DIRECTORY OF REPORTING COAL-PREPARATION PLANTS
AND ASSOCIATED FACILITIES, BY COUNTY—Continued**

County	Name, address, telephone number, and president/owner/manager of company	Name of plant (and map location number for coal-preparation plants)	Township	State mine number	Division of Reclamation permit number	Type of facility
Vinton (con't)	Jaymar Coal Co. Rte. 1 Cheshire, OH 45620 614-992-6637 Jay Hall, Jr., pres.	Jaymar Prep Plant (23)	Clinton	Vn-178	D-0185	prep plant—washers, cyclones, jig, centrifugal dryer, thickener, Diester table, screens, filter, crusher, magnet
	Sands Hill Coal Co., Inc. 1203 N. Pennsylvania Ave. Wellston, OH 45692 614-384-5659 Jack Huffman, pres.	Sands Hill Strip (24)	Clinton	Vn-641	D-0169	prep plant—heavy-media washers, flotation, cyclones, centrifuge, crushers, screens, dryer, picking tables, magnets
Wayne	Holmes Limestone Co. P.O. Box 295 Berlin, OH 44610 216-893-2721 E. E. Mullet, pres.	Holmes Limestone Preparation Plant (27)	Franklin	Hs-79	D-0283	prep plant—jig, crushers, dryers, screens, conveyors



Division of Geological Survey geologist (the late D. K. Webb) measuring the Middle Kittanning (No. 6) coal seam in the Congo mine, Monroe Township, Perry County. Photo taken in 1969.

1989 OHIO DIRECTORY OF REPORTING PRODUCING COAL-MINE OPERATORS, BY COUNTY

NOTE: This directory lists only the coal-producing operations. It does not list tipples, loading docks, preparation plants, or other active, nonproducing operations that would contribute to employment and wage statistics presented on p. 20-22.

SEAM IDENTIFICATION

1 Sharon	5 Lower Kittanning	7A Mahoning	11 Waynesburg
3 Lower Mercer	5A Strasburg	8 Pittsburgh	12 Washington
3A Upper Mercer	6 Middle Kittanning	8A Pomeroy-Redstone	A Anderson
4 Brookville	6A Lower Freeport	9 Meigs Creek	H Harlem
4A Clarion	7 Upper Freeport	10 Uniontown	W Winters

Name of company	Name of mine	Township	Seam	Thick- ness (inches)	Type of mine	Method of production	Tonnage produced in 1989	Days in production in 1989	Disposition		Employment			State mine number
									Method	Tonnage	Production		Non- produc- tion	
											Under- ground	Sur- face		
ATHENS COUNTY — Total production = 151,021 tons														
Avis Coal Co.	Avis Coal Co.	York	6 6A	60 24	surface	strip	151,021	314	truck	151,021		17		As-A ¹
BELMONT COUNTY — Total production = 4,963,841 tons														
Bennoc, Inc. Consolidation Coal Co. Cravat Coal Co.	Mario's Pit	Colerain	9,11		surface	strip	14,185	20	truck	14,185		3	1	Bt-1176
	Franklin 125	Flushing	8	59	shaft	longwall	165,937	35	truck	165,937	6		3	Hn-203 ²
	2400 #1	Flushing	8		surface	strip	44,592	97	water	44,592		8	1	Bt-146
	Sandy Ridge Pit	Goshen, Warren	11		surface	strip	27,652	117	water	10,365		4	1	Bt-1118
						auger	2,184		truck	19,471				
					Total	Total	29,836		Total	29,836				
	Hendrysburg West	Kirkwood	8		surface	strip	41,408	73	water	59,205		9	1	Bt-1131
					auger	auger	40,015		truck	22,218				
					Total	Total	81,423		Total	181,423				
	Neffs Pit	Pultney	9		surface	strip	8,161	30	truck	8,161		1	2	Bt-1160
	Barnesville Pit	Warren	7	36	surface	auger	3,029	5	truck	3,029		1	6	Bt-1143
	Kriechbaum Pit	York	8		surface	strip	27,087	148	water	21,787		9	2	Bt-78
					surface	strip			truck	5,300				
					Total	Total	27,087		Total	27,087				
Fairpoint Coal Co. J & W Mining Co.	Mel-Worth	Richland	9	36	surface	strip	21,995	21	truck	21,995		7	5	Bt-927
	Schoolhouse	Wheeling	9	48	surface	strip	5,139	8	truck	5,139		7	6	Bt-1180
	J & W Mining Co.	Mead	12	42	surface	strip	2,328	21	truck	3,635		1		Bt-1134
						auger	1,307		truck					
					Total	Total	3,635		Total	27,087				
Joyce Coal Co., Inc. K.C.C.I.	Yudasz	Colerain	8		surface	strip	49,436	65	truck	49,436		6		Bt-1166
	Haas	Richland	8		surface	strip	26,668	42	truck	26,668		5		Bt-1184
	Coleman Pit	Wheeling	9	40	surface	strip	8,653	13	truck	8,653		3	1	Bt-1130
	Susie Tipple	Wheeling	8	60	surface	strip	18,701	24	truck	18,701		6	1	Bt-1179
Marietta Coal Co.	Seabright-Bigley-Taylor	Colerain	11 12	28	surface	strip	54,375	62	truck	59,831		27	23	Bt-1105 ³
					auger	auger	5,456		truck					
					Total	Total	59,831		Total	59,831				
	Baltimore Coal-Presutti	Pease, Pultney	9	36	surface	strip	7,525	11	truck	7,525				Bt-1150
			10	18										
			11	29										

No mine number has been assigned by the Division of Mines.
¹See also Harrison County.
²See also Harrison County.
³Employment reported for Bt-1105 is a summary of employment for all Marietta Coal Co. operations.

¹No mine number has been assigned by the Division of Mines.

²See also Harrison County.

³Employment reported for Bt-1105 is a summary of employment for all Marietta Coal Co. operations.

Name of company	Name of mine	Township	Seam	Thick- ness (inches)	Type of mine	Method of production	Tonnage produced in 1989	Days in production in 1989	Disposition		Employment			State mine number
									Method	Tonnage	Production		Non- produc- tion	
											Under- ground	Sur- face		
BELMONT COUNTY (continued) Marietta Coal Co. (cont.)	Barack Henthorne et al.	Richland	11	36	surface	strip auger Total	106,058 16,037 122,095	100	truck	122,095				Bt-1104
	Oliver-Clark et al. Lude	Richland Richland	11 9	38 38	surface surface	auger strip auger Total	1,706 9,509 13,414 22,923	3 27	truck truck	1,706 22,923				Bt-1129 Bt-1132
	North American-Thornton	Richland	11 12	36	surface	strip auger Total	28,096 13,123 41,219	46	truck	41,219				Bt-1162
	Harrison Leasing Shaw	Richland Smith	11 11	36	surface surface	strip strip auger Total	13,769 32,914 2,518 35,432	36	truck truck	13,769 35,432				Bt-1183 Bt-1177
	Borovich-Neitzelt-Suter-Seaway	Smith	11	40	surface	strip auger Total	42,003 26,177 68,180	62	water truck Total	23,035 45,145 68,180				Bt-147
	Denham-Albaugh-Carey	Smith	11	44	surface	strip auger Total	84,198 21,340 105,538	92	truck	105,538				Bt-1164
	Consol	Union	8	51	surface	strip auger Total	139,758 74,294 214,052	177	truck	214,052				Bt-1109
	No. 38 Strip-Goff	Pease	12	40	surface	strip	23,562	229	water truck Total	13,395 10,167 23,562	2	2		Bt-1155
	No. 38 Strip-Riddle No. 38 Strip-Bianco Negus Strip 7400 Pit	Pease Richland Colerain Union	12 9 12 9	40 48 48 42	surface surface surface surface	strip strip strip strip	21,582 2,457 64,525 79,311	186 125 192 168	truck truck truck truck	21,582 2,457 64,525 79,311	2 4 3 11	2 1 1 2		Bt-1173 Bt-1149 Bt-992 Bt-1074
	Saffell Black Oak	Richland, Union Union, Wheeling	11 11 9	28 32 30	surface surface surface	strip strip strip auger Total	37,589 105,185 11,917 117,102	68 180	truck water truck Total	37,589 8,420 108,682 117,102	4 11	2 2		Bt-1102 Bt-948
	Powhatan #6	Smith, Washington	8	62	slope	cont. miner	1,685,800	261	rail water truck Total	1,172,103 140,175 467,292 1,779,570	247	84		Bt-68
R & F Coal Co.	Moore-Iddings	Flushing	11	24	surface	strip	67,910	124	water truck Total	51,398 16,253 67,651	8	1		Bt-1178

Yoe-Kemp	Goshen	11	28	surface	strip auger Total	28,577 9,693 38,270		water truck Total	42,065 56 42,121	2	Bt-1148
Meigs-Phillips	Goshen, Wayne	9 11	35 24	surface	strip auger Total	199,608 43,360 242,968	231	water truck Total	225,524 26,123 251,647	1	Bt-1168
American Legion	Kirkwood	9	36	surface	strip Total	38,927	89	water truck Total	32,890 5,933 38,823	1	Bt-1182
Loy-McFarland	Richland	11	36	surface	strip Total	58,599	142	water truck Total	44,631 13,712 58,343	7	Bt-1095
Fodor-Fulton	Smith	11	38	surface	strip auger Total	108,527 25,588 134,115	201	water truck Total	128,187 12,333 140,520	15	Bt-1169
Duncan	Smith	11 12	28 30	surface	strip auger Total	133,799 15,079 148,878	230	water truck Total	136,913 16,585 153,498	16	Bt-1170
Miller	Union	8 8A 9	42 12 42	surface	strip auger Total	473,454 1,962 475,416	279	water truck Total	418,650 71,296 489,946	1	Bt-1175
Dunlap-Harlan	Union	11	30	surface	strip Total	42,105	78	water truck Total	31,692 10,366 42,058	5	Bt-1181
Egypt Valley East	Warren	8		surface	strip auger Total	34,134 16,081 50,215	107	water truck Total	53,957 63 54,020	4	Bt-1154
MacMillan-Shephard	Wheeling	11	24	surface	strip Total	18,682	64	water truck Total	21,263 34 21,297	2	Bt-1139
Saginaw Mining Co.	Richland	8	60	slope	cont. miner Total	415,081	229	rail truck Total	319,813 84,844 404,657	45	Bt-643
CARROLL COUNTY — Total production = 793,097 tons											
Blum Coal Co.	Pickens Job Lee			surface	strip Total	1,788	65	truck	1,788	3	Cl-231
Buckeye-Industrial Mining Co.	Wilson Job	7A	34	surface	strip Total	1,788	25	truck	1,788	1	Cl-245
	Jones	6	36	surface	strip Total	4,221	31	truck	4,221	4	Cl-225
	R & T	7A	24	surface	strip auger Total	92,006 6,251 98,257	20	truck	98,257	13	Cl-243
Myers Greer	Rose	5,6 6	55 36	surface	strip auger Total	331,254 4,340 1,685	39 41	truck	331,254 6,025	15 1	Cl-238 Cl-242
Whitacre-Greer	Rose	5	42	surface	strip Total	98,734	228	truck	98,734	5	Cl-H ⁵
James Bros. Coal Co.	Rose	6 6A	42 24	surface	strip auger Total	16,017 2,749 18,766		truck	18,766	22	Cl-17 ⁶
Horizon Coal Corp.											

⁴Averages lower than one employee per month.

⁵No mine number has been assigned by the Division of Mines.

⁶Employment reported for Cl-17 is a summary of employment for all James Bros. Coal Co. operations.

⁴Averages lower than one employee per month.⁵No mine number has been assigned by the Division of Mines.⁶Employment reported for Cl-17 is a summary of employment for all James Bros. Coal Co. operations.

1989 OHIO DIRECTORY OF REPORTING PRODUCING COAL-MINE OPERATORS, BY COUNTY—Continued

Name of company	Name of mine	Township	Seam	Thick- ness (inches)	Type of mine	Method of production	Tonnage produced in 1989	Days in production in 1989	Disposition		Employment			State mine number
									Method	Tonnage	Under- ground	Production Sur- face	Non- produc- tion	
CARROLL COUNTY (continued)	James Bros. Coal Co.	Rose	6	22	surface	strip auger Total	52,208 8,843 61,051	124	truck	61,051				Cl-162
	Myers Mining	Center	7	55	surface	strip auger Total	23,545 4,892 28,437	269	truck	28,437	4	1		Cl-240
		Lee	H	24	surface	strip auger Total	30,643 6,223 36,866	300	truck	36,866	4	1		Cl-241
	Carl Noble & Son, Inc. Puskarich Limestone Co.	Lee Lee	H H	22	surface surface	strip strip	11,694 8,699	271	truck water truck Total	11,694 4,114 4,585 8,699	3	1		Cl-237 Cl-183
Regal Mining, Inc.	Buckeye Selway Camp Ecco	Lee Lee Perry	H H H	18 18 20	surface surface surface	strip strip strip	27,536 3,925 54,056	249	truck truck truck	27,536 3,925 54,056	11	7		Cl-239 ⁷ Cl-244 Cl-233
COLUMBIANA COUNTY — Total production = 1,222,322 tons														
Beaver Creek, Inc. Blum Coal Co.	Beaver Creek, Inc. Jackson-Strabula Job	Salem Center	6 6A 7	27 20 22	surface surface	strip strip	2,385 10,596	250	truck truck	2,385 10,598	2			Ca-855 Ca-944
	Minick Job	Center, Wayne	6 7	22 25	surface	strip	18,396	266	truck	27,286	3			Ca-950
Buckeye-Industrial Mining Co.	DeAngelo Pit	Franklin	7	24	surface	strip	16,782	256	truck	16,782	2			Ca-938
	Witherow	Wayne	6A	40	surface	strip	73,657	15	truck	73,657	14			Ca-965
	Ohio WV/Sheridan Mine	Wayne	6A	40	drift	cont. miner	462,337	274	truck	462,337	32	10		Ca-963
	Mountain Spring Coal Co. #6	Wayne	6A	44	drift	cont. miner	136,467	128	truck	136,467	28	3		Ca-978
Center Mining Co.	C. Ullom	Center	6A	12	surface	strip	5,636	138	truck	5,636	2			Ca-961
Coalbrook Mining, Inc. Commercial Minerals, Inc.	Carle & Oyster	West	6	36	surface	strip	10,588	97	truck	10,588	1	3		Ca-962
	Lisbon	Elkrun	7	20	surface	strip auger Total	63,012 7,188 70,200	107	truck	70,200	7			Ca-951
	West Point	Madison	6 7	40 24	surface	strip auger Total	76,762 50,175 126,937	185	truck	126,937	13	1		Ca-919
D. & D. Mining Co.	Saviors Mine	Unity	4 5	30 10	surface	strip auger Total	70,943 25,414 96,357	282	truck	96,357	15	5		Ca-348
East Fairfield Coal Co. John Glenn Mining Jeffco Sales & Mining Co.	"M" Mine Dawson Y & O Rd. Mine	Salem Middleton Madison	7 7 6A,7	18 30 36	surface surface surface	strip strip strip auger Total	106,375 29,886 4,027 16,558 20,585	176 149 60	truck truck truck	98,361 29,886 20,585	13 5 3	2 1		Ca-968 Ca-952 Ca-949
	Deep Mine #1 Benner Mine	Madison Middleton	6 6	34	drift surface	cont. miner strip	8,990 7,209	60 63	truck truck	8,990 7,209	4 1	8 2		Ca-922 Ca-945

Kelly Coal Co.	Morris Pit Burt Pit	Elkrun Fairfield	7 7	15 15	surface surface	strip strip auger Total	706 1,890 3,158 5,048	21 129	truck truck	706 5,048	5 4	⁸ 2	Ca-K ⁹ Ca-972
Lisbon Coal Crushers, Inc.	Rogers	Elkrun, Madison	6 7	36 20	surface	auger	13,185		truck	13,185			Ca-929
COSHOCTON COUNTY — Total production = 1,891,950 tons													
Algem Coal Development Co., Inc.	Jones Pit	Oxford	5,6,7	26	surface	strip	54,646	141	truck	54,646	9	2	Cn-A ⁹
G & M Mineral Co.	G & M Mineral Co.	Mill Creek	6	30	surface	strip	14,502		truck	14,502	5		Cn-823
Holmes Limestone Co.	Clark/557	Mill Creek	5,6	30	surface	strip	70,795	73	truck	70,795	6	1	Hs-97 ¹⁰
Miller Mining, Inc.	Garber Pit	Adams	5	24	surface	strip	35,638	254	truck	35,638	2	1	Cn-826
Peabody Coal Co.	Simco Mine	Linton	6	40	surface	strip	598,568	196	truck	178,277	132	38	Cn-799
							516,424		conveyor	516,424			
							694,701		Total	694,701			
R & F Coal Co.	Downing 36	Adams, Oxford	5 6	30 30	surface	strip auger	365,320 3,987	281	water truck	111,411 261,677	36	5	Cn-824
							369,307		Total	373,088			
	Taylor	Lafayette	5	30	surface	strip	14,728	106	truck	14,997	2		Cn-820
	Bartolec	Oxford	6 5 6	30 30 30	surface	strip auger	168,588 4,847	222	water truck	26,124 149,156	12	2	Cn-779
							173,435		Total	175,280			
	Wentz-Green Hathaway-Isleta	Oxford Oxford	6 5 6	30 11 20	surface surface	strip strip auger	14,107 497,028 17,876	82 281	truck truck	14,068 516,447	1 48	⁸ 7	Cn-814 Cn-HI ⁹
							514,904		Total				
R & R Minerals, Inc.	Porcher Area	Oxford	5 6 22	22 22	surface	auger	146	4	truck	146	1		Cn-PA ⁹
	Orange Pit	Adams	5 6	28 27	surface	strip	21,504	256	truck	21,504	2		Cn-822
Sugarcreek Clay & Limestone, Inc.	Coshocton Strip	Crawford	6		surface	strip	9,670	75	truck	9,670	4		Cn-825
Empire Coal Co.	Anco Mining	Monroe	7	26	surface	strip auger	14,871 5,207	125	truck	20,078	10	5	Gy-310
							20,078		Total				
R & F Coal Co.	Watson-Huhn	Millwood	8	38	surface	strip	14,630	56	water truck	10,041 4,589	1	⁸	Gy-304
									Total	14,630			
R. T. G., Inc. Thompson Mining Co.	R. T. G. #5 Thompson Mining Co.	Valley Jackson	7	48 (no production; see Muskingum County)	surface	strip	104,357	112	truck conveyor	104,357 2,309	10	2	Gy-305 Gy-308
HARRISON COUNTY — Total production = 2,387,099 tons													
Consolidation Coal Co.	Franklin 125 Mahoning Valley 36	Athens Athens	8 8 9	58 55 43	shaft surface	longwall strip	321,874 427,994	83 105	truck truck	321,874 427,994	18	9 14	Hn-203 ¹¹ Hn-700
Cravat Coal Co.	Shep-Can Pit	Monroe	7		surface	strip auger	30,826 6,530	62	water truck	18,544 18,812	4	3	Hn-233
							37,356		Total	37,356			

⁹Employment reported for CI-239 is a summary of employment for all Regal Mining, Inc., operations.

¹⁰Averages fewer than one employee per month.

¹¹No mine number has been assigned by the Division of Mines.

¹²See also Holmes County.

¹³See also Belmont County.

1989 OHIO DIRECTORY OF REPORTING PRODUCING COAL-MINE OPERATORS, BY COUNTY—Continued

Name of company	Name of mine	Township	Seam	Thick- ness (inches)	Type of mine	Method of production	Tonnage produced in 1989	Days in production in 1989	Disposition		Employment			State mine number
									Method	Tonnage	Production		Non- produc- tion	
											Under- ground	Sur- face		
HARRISON COUNTY (continued)	Rose Valley-587	Green	8 8A	56 16	surface	strip	64,297	126	water truck	12,789 51,508	4	2	Hn-222	
	Calvin-Mickey	German	H 8 8A	20 20	surface	strip auger	62,414 1,114	198	water truck	58,989 6,846	7	1	Hn-234	
	Lamborn	Green	8 8A	55 15	surface	Total strip	63,528 115,288	276	water truck	65,835 76,878 38,729	20	4	Hn-218	
	Tasa	Green, Short Creek	8 8A 9	59 20 18	surface	strip auger	79,288 934	164	water truck	115,607 56,825 26,071	8	1	Hn-225 ¹²	
	Lamborn South	Green, Short Creek	8 8A 9	60 20 20	surface	Total strip	80,222 227,967	258	water truck	82,896 149,182 79,778	22	3	Hn-236	
	Reppart	Short Creek	8 9	40 30	surface	strip	157,745	277	water truck	228,960 82,406 75,593	16	1	Hn-223	
	Duncanwood	Short Creek	8 8A 9	56 12 12	surface	strip auger	425,947 1,097	281	water truck	157,999 285,616 140,073	39	5	Hn-227	
	Mihelios-Pruneski	Short Creek	8 9	50 16	surface	Total strip auger	427,044 108,419 3,113	202	water truck	425,689 81,482 33,333	12	1	Hn-739	
	Matussek-Heil	Short Creek	8 8A 9	60 17 30	surface	Total strip auger	111,532 154,256 2,088	257	water truck	114,815 120,502 37,458	16	2	Hn-M ¹³	
	Myers North	Short Creek	8 8A	50 13	surface	Total strip	156,344 4,393	102	water truck	157,960 3,107 1,284	1		Hn-MN ¹³	
HOCKING COUNTY — Total production = 126,965 tons	Rogers #1	Athens	8 8 8,8A H	36 24	surface	strip surface strip surface strip	9,643 4,390 42,323 135,159	62 46 56	truck truck truck truck	4,391 9,643 4,390 42,323 135,159	1 2 6 20	14 1 3	Hn-237 Hn-747 Hn-217 Hn-738	
	No. 1 Strip	Ward	6A 5	34 36	surface	strip strip	12,313 27,843	70 259	truck truck	12,313 27,843	3 7	1	Hg-321 Hg-324	
	Keiffer	Ward	6 6A 7	96 36 66	surface	strip strip	30,609 44,744	259	truck water	30,609 44,744	9	14	Hg-325 Hg-295	
	Darmac	Starr	6,6A	66	surface	strip	11,456	198	water	11,456	5	3	Hg-V ¹³ , ¹⁵	
	Oliver Pit	Starr	6A	24	surface	strip								

HOLMES COUNTY — Total production = 452,349 tons

Holmes Limestone Co.	Farmerstown Clark/557	Clark	5,6	30	surface	strip	54,071	181	truck	54,071	4	1	Hs-92
	Clark	Clark, Walnut Creek	5,6	30	surface	strip	124,919	292	truck	124,919	5	1	Hs-97 ^{16a}
	Charm	Hardy	5,6	30	surface	strip	162,582	219	truck	162,582	7	1	Hs-96
	241 Plant	Prairie	4	24	surface	strip	13,838	231	truck	13,838	4	1	Hs-67
	Wayne Mines	Walnut Creek	4	24	surface	strip	36,507	162	truck	36,507	4	1	Hs-79 ^{16b}
	Trail Pit		5		surface	strip	49,052	254	truck	49,052	4	14	Hs-94
Miller Mining, Inc.			6		surface	strip	11,380	75	truck	11,380	5		Hs-825
Sugarcreek Clay & Limestone, Inc.	Hershberger Strip	Clark											
JACKSON COUNTY — Total production = 1,028,866 tons													
Elk Coal, Inc.	Bowling Strip	Milton	4,5		surface	strip	29,046	153	truck	29,046	3	1	Jkn-576
	Bowling Strip	Milton	4,5		surface	strip	30,849	156	truck	30,849	8	2	Jkn-E ¹³
LaMay Industries, Inc.	LaMay-Gilmore	Bloomfield	4A	48	surface	strip	259,167	63	truck	259,167	4	14	Jkn-1054
			5	34									
Milton Mining Co., Inc.	Greasy #1	Milton	4A	54	drift	cont. miner	36,017	149	truck	36,017	14	1	Jkn-548
Quality Coal Co.	Buckeye Furnace	Milton	5	24	surface	strip	205,348		truck	205,348	5		Jkn-1061
			6	24									
			7	24									
Royal Oak Industries, Inc.	Global	Liberty	1	20	surface	strip	19,865	45	truck	19,865	1		Jkn-566
Sands Hill Coal Co., Inc.	Sands Hill Strip #2	Milton	4A	29	surface	strip	80,277	171	water truck	19,720	5	14	Jkn-1055
			5	29									
			6	20					Total	80,277			
	Sands Hill Strip #4	Milton	4A	40	surface	strip	24,626		water truck	10,427			Jkn-SH ^{13,16c}
			5	50					truck	14,199			
									Total	24,626			
Stewart Coal Co.	Stewart Mine	Jackson	1	24	surface	strip	18,504	64	truck	18,504	13	14	Jkn-561 ¹⁷
	White Pit	Liberty	1		surface	strip	43,265	195	truck	43,265			Jkn-1064
Waterloo Coal Co., Inc.	Bowman Strip	Bloomfield, Madison	4A	48	surface	strip	281,902	63	truck	281,902	20	20	Jkn-367
			5	34									
JEFFERSON COUNTY — Total production = 1,915,949 tons													
Anthony Mining Co., Inc.	Pipo #51	Knox, Saline	8	40	surface	strip	84,560	199	truck	84,560	16	2	Jfn-788
	Maine 307	Wayne	8	54	surface	strip	79,505	246	truck	88,531	18	3	Jfn-789
			8A	16		auger	9,026						
					Total		88,531						
Boich Mining Co.	Boich Mining Co.	Cross Creek	8	56	surface	strip	258,768	144	truck	258,768	32	21	Jfn-528
C L A Coal Co.	Dunglen	Mount Pleasant	8	60	surface	strip	29,184	98	truck	29,594	6	1	Jfn-816
					auger		410						
					Total		29,594						
D & L Contractors, Inc.	D & L Strip	Smithfield	8	56	surface	strip	77,106	241	truck	77,106	17	3	Jfn-780
			8A	18									
F & M Coal Co.	F & M Strip	Wayne	8	54	surface	strip	16,590	217	truck	16,590	3		Jfn-784
Ohio Coal & Construction Corp.	No. 36 Strip-Greentown	Smithfield	8	48	surface	strip	31,257		truck	31,257	3	2	Jfn-807
			8A	24									
	No. 36 Strip-Friendship Park	Smithfield	8	50	surface	strip	133,661	266	truck	134,650	11	6	Jfn-804
			8A	24		auger	989						
					Total		134,650						
	No. 30 Strip-Heik	Warren	11	30	surface	strip	5,025	120	truck	5,025	1	1	Jfn-801
	No. 36 Strip-Kackley	Wells	8	48	surface	strip	10,847	144	truck	10,847	2	2	Jfn-814
			8A	20									
Ohio Edison Co.	Ohio Edison Co. Strip Mine	Knox	8	40	surface	strip	177,441	344	truck	177,441	20	6	Jfn-1267
R & F Coal Co.	Cochran-Swad	Mount Pleasant	11	36	surface	strip	954	8	water truck	655			Jfn-802
					surface	strip			truck	299			
					Total		954		Total				

¹⁵See also Jefferson County.¹⁶No mine number has been assigned by the Division of Mines.¹⁷Averages fewer than one employee per month.¹⁸Employment reported for Hg V is a summary of employment for all Valley Coal Corp. operations.¹⁹See also Coshocton County.²⁰See also Wayne County.²¹See also Vinton County.²²Employment reported for Jkn-561 is a summary of employment for all Stewart Coal Co. operations.

1989 OHIO DIRECTORY OF REPORTING PRODUCING COAL-MINE OPERATORS, BY COUNTY — Continued

Name of company	Name of mine	Township	Seam	Thick- ness (inches)	Type of mine	Method of production	Tonnage produced in 1989	Days in production in 1989	Disposition		Employment			State mine number
									Method	Tonnage	Production Under- ground	Production Sur- face	Non- produc- tion	
JEFFERSON COUNTY (continued)														
R & F Coal Co. (cont)	Tasa	Smithfield	8 8A	59 26	surface	strip auger Total	117,701 927 118,628	186	water truck Total	83,519 34,910 118,429	11	2	Hn-225 ¹⁸	
	Varkony-Polen	Wayne	8 8A	50 15	surface	strip	357,724	283	water truck Total	242,164 116,743 358,907	32	5	Jfn-720	
	Arrowhead	Wayne	8 8A	50 16	surface	strip	6,709	45	water truck Total	5,708 982 6,690	3	1	Jfn-817	
	Polen II	Wayne	9	12	surface	strip	5,570	42	water truck Total	3,823 1,747 5,570	1		Jfn P2 ¹⁹	
S. & D. Construction Corp.	Rankin Mine	Knox	8	48	surface	strip auger Total	31,450 3,937 35,387	162	truck	35,387	5	4	Jfn-797	
	Smith 487	Smithfield	8 8A	56 20	surface	strip	15,815	128	truck	15,815	5	3	Jfn-795	
Schiappa Coal Co., Inc. Valley Mining, Inc.	York	Green, Smithfield	8 8A	60 22	surface	strip auger Total	246,078 9,173 255,251	294	truck	255,251	15	2	Jfn-813	
	# 19 Zimnox #4	Wells Wells	8 8	54 50	surface surface	strip strip	144,797 60,745	252 99	truck truck	148,120 60,745	31 11	3 9	Jfn-687 Jfn-703	
LAWRENCE COUNTY — Total production = 26,532 tons														
Belville Mining Co., Inc.	Brady Creek	Washington	4A 5	30 30	surface	strip	2,144		water truck Total	1,708 436 2,144	1		Le-450	
Waterloo Coal Co., Inc.	Blackfork Pit	Washington	5	20	surface	strip	24,388		truck	24,388			Le-451	
MAHONING COUNTY — Total production = 198,159 tons														
East Fairfield Coal Co.	"HP" Mine	Springfield	4 5	28 10	surface	strip auger Total	181,212 12,185 193,397	217	truck	202,844	19	3	Mg 626	
Thompson Bros. Mining Co.	Peres Mine	Beaver	4	30	surface	strip	4,762	76	truck	4,762	2	2	Mg 65	
MEIGS COUNTY — Total production = 3,734,156 tons														
Southern Ohio Coal Co.	Meigs Mine #2	Columbia	4A	57	shaft	longwall cont. miner Total	2,322,595 596,967 2,919,562	236	conveyor	2,864,136	365	136	Ms-294	
	Meigs Mine #1	Salem	4A	57	shaft	longwall cont. miner Total	135,615 678,979 814,594	194	rail conveyor Total	7,786 793,884 801,670	246	290	Ms-293 ²⁰	

MONROE COUNTY — Total production = 1,980,914 tons													
Quarto Mining Co. (sub- sidiary of Consolidation Coal Co.)	Powhatan #4	Salem	8	60	shaft	longwall cont. miner Total	1,640,067 340,847 1,980,914	231	water	1,980,914	220	109	Me-4
MUSKINGUM COUNTY — Total production = 932,882 tons													
Black Rock, Ltd. Central Ohio Coal Co.	Black Rock, Ltd. Muskingum Mine	Washington Meigs	6 9	35 45	drift surface	cont. miner strip auger Total	32,562 767,531 12,321 779,852	90 59	truck truck conveyor Total	32,562 220,454 559,398 779,852	10	2 100	Mum-268 Ne-41 ²¹
Cravat Coal Co. King Quarries, Inc.	Bloomfield Pit King Strip	Highland Wayne	A 6	32	surface surface	strip strip	17,780 19,100		truck water truck Total	17,780 7,328 11,772 19,100	3	1	Mum-244 Mum-237
Sands Mining Corp.	Sands Mining Corp.	Washington	6		surface	strip auger Total	18,357 59,402 77,759	132	truck	77,759	17	3	Mum-239
Thompson Mining Co.	Thompson Mining Co.	Newton	5,6	36	surface	strip	77,759 5,829	90	truck	5,829	1		Gy-308
B & N Coal, Inc.	Shevlin Ullman Shilling Guiler Magazine Muskingum Mine	Elk Jefferson Jefferson Marion Stock Brookfield, Noble, Sharon	9 9 9 9 9 9	30 30 30 40 30 43	surface surface surface surface surface surface	strip strip strip strip strip auger Total	78,223 31,184 145,395 258,860 49,809 2,519,791 66,514 2,586,305	130 72 174 243 122 223	truck truck truck truck truck conveyor other Total	78,223 31,184 145,395 258,860 49,809 663,606 1,922,696 3	5 3 3 13 3 285	1 22 1 1 1 315	Ne-150 Ne-151 ²³ Ne-1008 Ne-146 Ne-149 Ne-41 ²⁴
King Quarries, Inc. R & F Coal Co.	Nau Long-LaFever	Buffalo Beaver	A 9	40	surface surface	strip strip	7,500 56,997	101	truck water truck Total	7,500 41,882 15,068 56,950	1 9	1 2	Ne-152 Ne-147
	Flood-Cline	Beaver	9	40	surface	strip	137,765	128	water truck Total	144,917 2,051 146,968	17	2	Ne-FC ¹⁹
PERRY COUNTY — Total production = 1,536,156 tons													
Buckingham Mining & Reclamation	Drakes	Monroe	6 7	60 30	surface	strip	147,906	309	truck	147,906	11	4	Py-340
Crooksville Coal Co., Inc.	Crooksville Strip	Bearfield	5 6	30 42	surface	strip	235,708	291	truck	316,233	47	4	Py-317
Peabody Coal Co.	Crooksville Coal Co., Inc. Sunnyhill #9 South	Jackson Pleasant	7 6	12 39 55	surface drift	strip cont. miner	23,945 1,128,597	65 247	truck rail truck conveyor Total	23,945 60,319 317,755 774,326 1,152,400	5 201	1 31	Py-335 Py-265
STARK COUNTY — Total production = 195,720 tons													
Buckeye-Industrial Mining Co.	Dobransky	Osnaburg, Sandy	5,6	34	surface	strip	19,766	12	truck	19,766	4		Sk-237

¹⁹See also Harrison County.

²⁰No mine number has been assigned by the Division of Mines.

²¹Meigs Mine #1 and Raccoon Mine #3 merged in 4th quarter 1989 to form Meigs Mine #31. Production from this mine totalled 41,472 tons from Meigs and Vinton Counties. Total tonnage produced is included in with the production from Me-293 and Vn-652.

²²See also Noble County.

²³Averages fewer than one employee per month.

²⁴See also Washington County.

²⁵See also Muskingum County.

¹⁸See also Harrison County.¹⁹No mine number has been assigned by the Division of Mines.²⁰Meigs mine and Raccoon Mine #3 merged in 4th quarter 1989 to form Meigs Mine #31. Production from this mine totaled 41,722 tons from Meigs and Vinton Counties. Total tonnage produced is included in with the production from Meigs and Vinton Counties.²¹See also Noble County.²²Averages fewer than one employee per month.²³See also Washington County.²⁴See also Muskingum County.

J D Mining, Inc.	Johnson	Dover	4 5 5A 6	24 42 18 18	surface	strip	15,328	39	truck	15,328	2	Ts-J ²⁵
	Barnhill Pit	Goshen	6A 6	58 18	surface	strip	16,282	67	truck	16,282	2	Ts-2000
	Swartz Pit	Goshen	6A 6	56 18	surface	strip	14,514	147	truck	14,514	2	Ts-2004
	Craig Pit	Goshen	5 6	18 42	surface	strip	8,736	40	truck	8,736	3	Ts-JD ²⁵
Kimble Clay & Limestone Co.	Lorenz Pit	Warwick	5 6	24 54	surface	strip	37,561	190	truck	37,561	4	Ts-198
	Kimble Clay & Limestone Co.	Dover	3A 4	20 20	surface	strip	63,507	225	truck	63,507	3	Ts-K1 ²⁶
	Kimble Clay & Limestone Co.	Dover	5 6	28 36	surface	strip	87,056	175	truck	87,056	3	Ts-K2 ²⁶
					auger	Total	87,888					
L & M Mineral Co.	Kimble Clay & Limestone Co.	Dover	3A 4	20 20	surface	strip	13,486	60	truck	13,486	1	Ts-K3 ²⁵
	Kimble Clay & Limestone Co.	Dover, Sugar Creek	4 5	18 28	surface	strip	36,521	229	truck	36,521	3	Ts-1727
	Kimble Clay & Limestone Co.	York Mill, Rush	6 6 7	36 46 40	surface	strip	30,242	117	truck	28,737	1	Ts-1987
	Evans				surface	strip	7,435		truck	12,176	6	Ts-1884
Red Malcuit, Inc.	Luikert	Mill, Warwick	5,6		surface	strip	12,176		truck	37,413	6	Ts-1914
	Spring Romug	Mill, Warwick Rush	6 6	40	surface	strip	35,951		truck	2,886	1	Ts-1982
					auger	Total	1,462		truck	6,314	2	Ts-1930
					surface	strip	2,886					
Miller Mining, Inc.	RMI #2	Franklin	3A 4	23 18	surface	strip	36,005	262	truck	36,005	6	Ts-2007
	RMI #1	York	5 6	30 36	surface	strip	94,814	285	truck	95,561	10	Ts-1918
					auger	Total	747					
	Schindler-Fondriest	Dover	5,6		surface	strip	95,561	254	rail truck	35,883	4	Ts-197
Puskarich Mining, Inc.	Shrock-Miller Shrock-Hostetler	Sugar Creek Sugar Creek	3A 3A,4		surface	strip	77,272		Total	41,389		
					surface	strip	24,031	128	truck	24,031	2	Ts-1990
					surface	strip	57,962	190	rail	3,528	5	Ts-2002
					surface	strip	45,788	53	truck	45,652		
R. & E. Coal Co. R & F Coal Co.	Troyer-Gordon Mast-Miller-Widder Bose New Cumberland Pit	Sugar Creek Sugar Creek Wayne Warren	3A,4 5,6 3A,4 6		surface	strip	18,956	158	Total	49,180		
					surface	strip	30,658	103	truck	18,956	2	Ts-2008
					surface	strip	8,183	98	truck	30,658	3	Ts-2010
					surface	strip	45,788	53	rail	8,183	1	Ts-2009
R. & E. Coal Co. R & F Coal Co.	Sandy Mill		6 7 8	35 28 28	surface	strip	5,875	39	truck	22,510	4	Ts-1917
					surface	strip	73,275	254	water	23,278		
					auger	Total	16,732		truck	45,788		
					Total		90,007		Total	5,875	4	Ts-2006
										83,848	7	Ts-DW ²⁵
										13,267	1	
										97,115		

²⁵Averages fewer than one employee per month.
²⁶No mine number has been assigned by the Division of Mines.

1989 OHIO DIRECTORY OF REPORTING PRODUCING COAL-MINE OPERATORS, BY COUNTY—Continued

Name of company	Name of mine	Township	Seam	Thick- ness (inches)	Type of mine	Method of production	Tonnage produced in 1989	Days in production in 1989	Disposition		Employment		State mine number	
									Method	Tonnage	Production Under- ground	Non- produc- tion		
TUSCARAWAS COUNTY (continued)														
R & F Coal Co. (cont')	Furbay-Beem	Rush	7	30	surface	strip	1,185	15	water truck	1,349 2		4	Ts-1978	
						Total	1,351							
Valley Mining, Inc.	Metcalf Strip S & C Development Heddeston	Rush Mill Mill	7	20	surface	strip	1,455	31	truck	1,455	1	5	Ts-2003	
			7	28	surface	strip	5,191	14	truck	5,191	1	1	Ts-1980	
			7		surface	strip	34,443	140	truck	42,430	8	1	Ts-2005	
					auger	7,987								
						Total	42,430							
Lattavo	Mill	Mill	5	28	surface	strip	1,957	39	truck	7,127	8	1	Ts-2011	
			6	36	surface	auger	5,170							
			7	42		Total	7,127							
						strip	24,992	97	truck	35,205	7	1	Ts-1983	
Fouts-Edwards	Rush	Rush	7	24	surface	strip	24,992							
					auger	10,213								
					Total	35,205								
					strip	103,973	219	truck	123,311	12	1	Ts-1999		
Page	Union	Union	7	34	surface	strip	103,973							
					auger	19,338								
					Total	123,311								
					strip	1,984		truck	1,984			Ts-540		
Zoar Mining Co.	Zoar Mining Co.	Sandy	4		surface	strip								
VINTON COUNTY — Total production = 2,200,849 tons														
B. & D. Coal, Inc.	B. & D. Coal #1	Clinton	3	24	surface	strip	30,722	88	truck	30,722	2	5	Vn-623	
	B. & D. Coal #1	Clinton	4	30	surface	strip								
	B. & D. Coal #1	Clinton	3	24	surface	strip	12,865	50	truck	12,865	2		Vn-B ²⁷	
	B. & D. Coal #1	Clinton	4	30	surface	strip								
Benedict, Inc.	Waldron Pit Allied West Austin Pit	Clinton	4	30	surface	strip	22,077	79	truck	22,077	3	11	Vn-BD ²⁷	
		Clinton	4, W	24	surface	strip	36,328	130	truck	36,328	3	1	Vn-183	
		Elk	W, 4A, 5	24	surface	strip	95,476	130	truck	95,476	9	3	Vn-184	
		Elk	4A	24	surface	strip	63,547	130	truck	63,547	11	9	Vn-187	
R. A. Eberts Co., Inc.	Mitchell Hollow McArthur Pit Stewart Green Strip II	Swan	5	15	surface	strip								
		Elk	6	30	surface	strip	1,404		truck	1,404			Vn-172	
		Elk	4, 5	24	surface	strip	188,943		truck	188,943	24		Vn-163	
		Madison	3	15	surface	strip	8,296		truck	8,296	6	1	Vn-186	
McArthur Lumber & Post Co., Inc. Quality Coal Co.	McArthur Lumber & Post Co., Inc. Church	Clinton	4	48	surface	strip	129,064		truck	129,064			Vn-182	
		Clinton	5	17										
		Elk	3	18	surface	strip	2,687	72	truck	2,687	1		Vn-189	
		Clinton	4	24	surface	strip	157,299	132	truck	157,299	13		Vn-181	
Sentry	Sentry	Clinton	6	24	surface	strip	68,398	56	truck	68,398	5		Vn-655	
		Clinton	5	24	surface	strip								
		Elk	4	24	surface	strip								
		Elk	5	24	surface	strip	231,448	183	truck	231,448	17		Vn-188	

R & S Coal Co., Inc. Sands Hill Coal Co., Inc.	R & S Strip Sands Hill Strip #1	Clinton Clinton	3	30	surface	strip	21,848	83	truck	21,848	3	38	Vn-173 Vn-641 ²⁸
			W	30	surface	strip	210,925	254	water	66,830			
			4A	35					truck	144,095			
			5	28					Total	210,925			
Sands Hill Strip #3	Clinton	7	20								Vn-S ²⁷		
		W	24	surface	strip	170,803		water	61,435				
		4A	34					truck	109,368				
		5	15					Total	170,803				
Sands Hill Strip #4	Clinton	6	15								Jkn-SH ^{27, 29}		
		6A	14	surface	strip	24,626		water	10,426				
		4A	40					truck	14,200				
		5	50					Total	24,626				
Southern Ohio Coal Co.	Raccoon Mine #3	Wilkesville	4A	57	drift	longwall	141,382	186	rail	523,605	108	Vn-652 ³⁰	
					cont. miner	582,711							
					Total	724,093				233			
			WASHINGTON COUNTY — Total production = 65,382 tons										
B & N Coal, Inc.	Wagner, Lincoln Ullman	Aurelius Salem	9	30	surface	strip	20,755	17	truck	20,756	2	Wn-1005 Ne-151 ³¹	
			9	30	surface	strip	44,627	109	truck	44,627			5
WAYNE COUNTY — Total production = 31,910 tons													
Holmes Limestone Co.	Wayne Mines	Franklin	4	24	surface	strip	31,910	130	truck	31,910	4	1	Hs-79 ³²

²⁷No mine number has been assigned by the Division of Mines.

²⁸Employment reported for Vn-641 is a summary of employment for all Vn-641 and Vn-S.

²⁹See also Jackson County.

³⁰Meigs Mine #1 and Raccoon Mine #3 merged in 4th quarter 1989 to form Meigs Mine #31. Production from this mine totalled 414,722 tons from Meigs and Vinton Counties. Total tonnage produced is included with the production from Ms-293 and Vn-652.

³¹See also Noble County.

³²See also Holmes County.

1989 OHIO ALPHABETICAL DIRECTORY OF INDUSTRIAL-MINERAL MINE OPERATORS

[illegible]

1989 OHIO ALPHABETICAL DIRECTORY OF INDUSTRIAL-MINERAL MINE OPERATORS—Continued

Name, address, telephone number, and president/owner/manager of company	Name of mine (and map location number)	County	Commodity	1989 sales (tons)	1989 production (tons)	State mine number	Division of Reclamation permit number
Apache Aggregate & Paving Co. 46626 County Rte. 495 Coshocton, OH 43812 614-622-5904 Edward E. Ross, pres.	Apache Aggregate & Paving Co. (69) Apache Aggregate & Paving Co. (70)	Coshocton Coshocton	sand & gravel sand & gravel	⁴ 88,059	39,955	Cn-718 Cn-783	IM-227 IM-717
Ashcraft Sand & Gravel 5840 Dry Fork Rd. Cleves, OH 45002 513-367-2177 Otis Ashcraft, pres.	Ashcraft Sand & Gravel (120)	Hamilton	sand & gravel	45,493	45,493	Hmn-54	IM-710
Athens Hocking Reclamation 35380 Hocking Dr. P.O. Box 946 Logan, OH 43138 614-385-6019 Ann Kilbarger, pres.	Athens Hocking Reclamation (81)	Athens	clay	182	182	As-594	
Atlas Towing Co. P.O. Box 1632 Parkersburg, WV 26101 304-428-0341 Christopher V. Criss, pres.	Belpre Bank Run (432)	Washington	sand & gravel	15,180	15,180	Wn-54	IM-383
Aurora Sand & Gravel Co. 60 Treat Rd. Aurora, OH 44202 216-641-0300 Gary Helf, pres.	Aurora Sand & Gravel Co. (260)	Portage	sand & gravel	135,978	147,618	Pe-84	IM-868
Ayers Limestone Quarry, Inc. 2000 Colerain Pike P.O. Box 67 Martins Ferry, OH 43935 614-633-2958 Thomas E. Ayers, pres.	Ayers Limestone Quarry, Inc. (12)	Belmont	limestone	85,209	63,819	Bt-716	IM-1
B & D Paving, Inc. P.O. Box 463 Powhatan Point, OH 43942 304-233-6505 Suzanne Hendershot, pres.	B & D Paving, Inc. (424)	Monroe	sand & gravel	5,139	5,139	Me-508	IM-1000
B-M Machine Co. 12146 N. Pairston Rd. Huntsburg, OH 44046 216-635-9151 Bob Zalar, owner	B-M Machine Co. (442)	Geauga	sand & gravel	2,700	2,700	Gea-39	IM-1104
Baker Sand, Inc. 700 White Rd. Burbank, OH 44214 216-948-1448 Thom E. Baker, pres.	Baker Sand, Inc. (202) Baker Sand, Inc. (203)	Medina Medina	sand & gravel sand & gravel	149,801 711,575	208,340 880,993	Ma-4 Ma-20	IM-426, IM-442 IM-448
Barrett Paving Materials, Inc. 7374 Main St. Cincinnati, OH 45244 513-271-6200 Michael Petitjean, pres.	Perintown Plant (59) Round Bottom Rd. Plant (434)	Clermont Hamilton	sand & gravel sand & gravel	⁵ 66,950	114,723	Ct-9 Hmn-56	IM-526 IM-631
Barrett Paving Materials, Inc. 9570 State Rte. 128 Harrison, OH 45030 513-271-6200 Chris Ziehler, w. district mgr.	Miamitown Plant #53 (121)	Hamilton	sand & gravel	256,669	306,320	Hmn-44	IM-120
Beaver Creek, Inc. 7219 Salem-Unity Rd. Salem, OH 44460 216-337-3534 Delyte DeYarmon, pres.	Beaver Creek, Inc. (64) (3)	Columbiana	sand & gravel sandstone	75,005 79,795	68,171 79,795	Ca-855	IM-891
Beck Sand & Gravel, Inc. 2820 Webb Rd. Ravenna, OH 44266 216-626-3863 Robert E. Wenrich, pres.	Beck Sand & Gravel, Inc. (256)	Portage	sand & gravel	328,830	328,830	Pe-50	IM-96

⁴No sales or production.⁵No report filed in 1989.

1989 OHIO ALPHABETICAL DIRECTORY OF INDUSTRIAL-MINERAL MINE OPERATORS—Continued

Name, address, telephone number, and president/owner/manager of company	Name of mine (and map location number)	County	Commodity	1989 sales (tons)	1989 production (tons)	State mine number	Division of Reclamation permit number
Becky Lane Trucking, Inc. 441 Iowa St. Ashland, KY 41101 606-325-8301 Janet Griffiths, pres.	Becky Lane Sand (167)	Lawrence	sand & gravel	15,110	15,110	Le-430	IM-844
Paul D. Beery Trucking Co. 4770 Cincinnati-Zanesville Rd. NE Lancaster, OH 43130 614-653-5061 Paul D. Beery, pres.	Paul D. Beery Trucking Co. (401)	Fairfield	sand & gravel	6,845	1,040	Fd-14	IM-933
Belden Brick Co. P.O. Box 910 Canton, OH 44701 216-852-2424 John C. Jensen, environmental engineer	Moomaw Pit (56) (56)	Tuscarawas	clay shale	71,947 51,910	71,947 51,910	Ts-1517	IM-46
	Finzer-Belden (57) (57)	Tuscarawas	clay shale	16,789 65,723	16,789 65,723	Ts-1646	IM-44
	Belden-Wallick (58) (58)	Tuscarawas	clay shale	115,065 27,567	115,065 27,567	Ts-1841	IM-45
	Shanesville Pit (59) (59)	Tuscarawas	clay shale	47,397 67,207	47,397 67,207	Ts-1939	IM-47
	Beagle Pit (60)	Tuscarawas	clay	15,059	15,059	Ts-1960	IM-48
Belu & Son Paving, Inc. 4900 French Creek Rd. Lorain, OH 44054 216-277-7087 John W. Belu, pres.	Belu Sand Pit (191)	Lorain	sand & gravel	1,529	1,529	Ln-12	IM-731
Belville Mining Co., Inc. P.O. Box 834 Ironton, OH 45638 614-643-2331 Thomas J. Belville, pres.	Brady Creek (25) (25) (140)	Lawrence	clay shale	⁶ ⁶		Le-403	D-0536
	Brady Creek (80)	Lawrence	limestone clay	75,168 12,330	75,168 12,330	Le-449	D-0746
Benco Leasing, Inc. State Rte. 416 Rte. 3 New Philadelphia, OH 44663-9507 216-339-3339 Ben Cookson, pres.	Goshen Sand & Gravel (389)	Tuscarawas	sand & gravel	16,828	23,381	Ts-1976	IM-941, IM-942
Best Sand Corp. 11830 Ravenna Rd. P.O. Box 87 Chardon, OH 44024 216-946-3441 William E. Conway, pres.	Best Sand Corp. (17)	Geauga	sandstone	598,695	688,797	Gea-3	IM-89
Beverly Slag Co. P.O. Box 599 McConnelsville, OH 43756 614-962-5621 Fred R. Price, pres.	Devola Pit (364)	Washington	sand & gravel	15,355	14,602	Wn-55	IM-669
Big Walnut Sand & Gravel Co. 88 W. Mound St. Columbus, OH 43215-5018 614-224-2678 Steven D. Rowe, partner	Big Walnut Sand & Gravel Co. (97)	Franklin	sand & gravel	3,378	250	Fn-14	IM-832
Black Top Contracting, Inc. P.O. Box 98 Belpre, OH 45714 614-423-5455 Terry R. Wyatt, pres.	Black Top #1 (19)	Athens	sand & gravel	20,510	20,510	As-588	IM-630
E. E. Blair Construction Co. P.O. Box 39 Wheelersburg, OH 45694 614-574-6575 Edwin E. Blair, pres.	E. E. Blair Construction Co. (303)	Scioto	sand & gravel	78,650	91,700	So-98	IM-474
Blue Jay Enterprises Rte. 5 Box 44 Dover, OH 44622 216-364-8621 Michael Nugo, owner	Swanger (85) (85)	Tuscarawas	clay shale	4,465 2,761	4,465 2,761	Ts-520	IM-214

⁶No sales or production.

1989 OHIO ALPHABETICAL DIRECTORY OF INDUSTRIAL-MINERAL MINE OPERATORS—Continued

Name, address, telephone number, and president/owner/manager of company	Name of mine (and map location number)	County	Commodity	1989 sales (tons)	1989 production (tons)	State mine number	Division of Reclamation permit number
Bluffton Stone Co. P.O. Box 26 Bluffton, OH 45817-0026 419-358-6941 Brent C. Gerkin, pres.	Bluffton Stone Co. (3)	Allen	limestone	127,063	159,287	An-1	IM-485
Bolin & Bartley, Inc. 1217 County Rd. 1475 Rte. 1 Ashland, OH 44805 419-289-1507 Clarence W. Bolin, treas.	Bolin & Bartley Sand & Gravel (409)	Richland	sand & gravel	35,462	58,300	Rd-20	IM-617
Elmer Borchardt, Inc. 313 E. Lucas St. P.O. Box 188 Castalia, OH 44824-0188 419-684-5361 Dean Wikel, pres.	Elmer Borchardt, Inc. (83)	Erie	sand & gravel	1,000	1,000	Ee-18	IM-676
Bowerston Shale Co. 1329 Seven Hills Rd. NE Newark, OH 43055 614-763-3921 William U. Milliken, pres.	Hanover (31) Frazeysburg (38)	Licking Muskingum	shale clay	19,840 8,672	19,840 8,672	Lg-501 Mum-776	IM-257 IM-256
Bowerston Shale Co. 515 Main St. Bowerston, OH 44695 614-269-2921 William U. Milliken, pres.	Bowerston (11)	Harrison	shale	30,975	30,975	Hn-152	IM-42
D. H. Bowman & Sons, Inc. 1201 State Rte. 97 P.O. Box 57 Bellville, OH 44813-1227 419-886-2711 Richard D. Bowman, pres.	D. H. Bowman & Sons, Inc. (287)	Richland	sand & gravel	81,884	56,627	Rd-4	IM-279
Boyas Excavating, Inc. 4100 Brookpark Rd. Cleveland, OH 44134-1196 216-398-3900 Pete Boyas, pres.	Boyas' Valley View Quarry (13)	Cuyahoga	sandstone	7		Cya-42	IM-686
Boyd Gravel Co. 24270 Twp. Rd. 1202 Coshocton, OH 43812 614-622-4406 Don E. Mill, pres.	Boyd Gravel Co. (71)	Coshocton	sand & gravel	116,034	97,865	Cn-694	IM-293
Briar Hill Stone Co. P.O. Box 398 Glenmont, OH 44628 216-276-4011 Barry T. Blum, pres., 1989 (Bill W. Alde, pres., 1990)	Quarry #26 (4) Quarry #3 (5) Quarry #32 (6) Quarry #24 (7) Quarry #18 (8) Quarry #54 (46) Quarry #55 (44) Quarry #31 (19) Quarry #34 (22) Quarry #6 (23)	Coshocton Coshocton Coshocton Coshocton Coshocton Coshocton Coshocton Holmes Knox Knox	sandstone sandstone sandstone sandstone sandstone sandstone sandstone sandstone sandstone sandstone	2,789 2,385 2,756 302 8,592 18 8,254 2,381 5 196	4,150 1,844 2,509 69 9,100 0 7,597 2,701 0 354	Cn-13 Cn-659 Cn-686 Cn-692 Cn-695 Cn-809 Cn-815 Hs-49 Kx-10 Kx-12	IM-397 IM-232 IM-504 IM-294 IM-402 IM-909 IM-939 IM-418 IM-444 IM-445
Briggs Sand & Gravel, Inc. Rte. 4 County Rd. 10 Box 303 Marietta, OH 45750 614-373-3363 James F. Briggs, pres.	Briggs Sand & Gravel, Inc. (365)	Washington	sand & gravel	9,450	9,450	Wn-508	IM-57
Broadway Sand & Gravel, Inc. 2000 Sandridge Dr. Dayton, OH 45439 513-299-1166 Herbert H. Cornett, pres.	Broadway Sand & Gravel, Inc. (225)	Montgomery	sand & gravel	105,791	105,791	My-65	IM-594
Broshear Contractors, Inc. 2520 Millville-Ross Rd. Hamilton, OH 45013 513-863-3388 Clarence Broshear, pres.	Ross Township Gravel (31)	Butler	sand & gravel	4,754	5,024	Br-48	IM-562

⁷No sales or production.

1989 OHIO ALPHABETICAL DIRECTORY OF INDUSTRIAL-MINERAL MINE OPERATORS—Continued

Name, address, telephone number, and president/owner/manager of company	Name of mine (and map location number)	County	Commodity	1989 sales (tons)	1989 production (tons)	State mine number	Division of Reclamation permit number
Brown County Rock Crusher State Rte. 221 Georgetown, OH 45121 513-378-6456 Brown County Board of Commissioners	Brown County Rock Crusher (14)	Brown	limestone	2,104	2,104	Bn-1	
D & L Browning Excavating, Inc. 5593 Mason-Morrow-Millgrove Rd. Morrow, OH 45152 513-899-3751 Daniel L. Browning, owner	Riverside Sand & Gravel (391)	Warren	sand & gravel	520	320	Wan-B ⁸	IM-679
Karl Brugmann Sand & Gravel, Inc. 8420 Weaver Rd. Ravenna, OH 44266 216-626-3914 Donald H. Brugmann, owner	Karl Brugmann Sand & Gravel, Inc. (257)	Portage	sand & gravel	97,894	84,674	Pe-15	IM-104
Oscar Brugmann Sand & Gravel, Inc. 3828 Dudley Rd. Mantua, OH 44255 216-274-8224 Roy Brugmann, pres.	Oscar Brugmann Sand & Gravel, Inc. (258)	Portage	sand & gravel	393,149	460,000	Pe-9	IM-119
James Bunnell, Inc. 5714 State Rte. 128 Cleveland, OH 45002 513-353-1100 James Bunnell, pres.	James Bunnell, Inc. (123) James Bunnell, Inc. (124)	Hamilton Hamilton	sand & gravel sand & gravel	⁹ 252,994	252,994	Hmn-50 Hmn-59	IM-205 IM-815
Burlington Sand & Gravel Co. P.O. Box 399 Chesapeake, OH 45619 614-894-5978 Vernon E. Collier, owner	Burlington Sand & Gravel Co. (170)	Lawrence	sand & gravel	7,239	7,239	Le-426	IM-856
C & S Contractors, Inc. P.O. Box 42459 Cincinnati, OH 45242 513-791-7747 Raymond A. Conn, pres.	C & S Contractors, Inc. (356)	Warren	sand & gravel	¹⁰		Wan-47	IM-846
Canton Aggregate Div. of Central Allied Enterprises, Inc. P.O. Box 80449 Canton, OH 44708-0449 216-477-6751 John A. Woodhall, Jr., pres.	Canton Aggregate (318) Canton Aggregate (319)	Stark Stark	sand & gravel sand & gravel	379,595 135,254	379,595 106,151	Sk-681 Sk-689	IM-164 IM-173
Carpenter's Excavating 4224 Fernbrook St. Kettering, OH 45440 513-299-7328 William D. Carpenter, owner	Carpenter's Excavating (228)	Montgomery	sand & gravel	⁹		My-67	IM-725
Cedar Heights Clay Co. Division of Resco Products, Inc. P.O. Box 295 Oak Hill, OH 45656-0295 614-682-7794 William T. Tredennick, pres.	Shumate/Alban (21) Cedarloo/Jenkins (22)	Jackson Jackson	clay clay	14,498 4,697	14,498 4,697	Jkn-1001 Jkn-1007	IM-19, IM-336 IM-24
Celotex Corp. P.O. Box 280 Port Clinton, OH 43452 419-734-3153 W. D. Herbert, pres.	American #2 (1)	Ottawa	gypsum	237,039	237,039	Oa-2	IM-344
Central Ohio Coal Co. P.O. Box 98 Cumberland, OH 43732 614-962-2013 J. E. Katlic, exec. v. pres.	Horse Run (73) Tilton's Run (141) Hoskinsville Stone Quarry (138)	Morgan Muskingum Noble	limestone limestone limestone	97,514 ⁹ 217,760	97,514 ⁹ 217,760	Mon-600 Ne-41 Ne-147	IM-281 D-0559 IM-921

⁸No mine number has been assigned by the Division of Mines.⁹No sales or production.¹⁰No report filed in 1989.

1989 OHIO ALPHABETICAL DIRECTORY OF INDUSTRIAL-MINERAL MINE OPERATORS—Continued

Name, address, telephone number, and president/owner/manager of company	Name of mine (and map location number)	County	Commodity	1989 sales (tons)	1989 production (tons)	State mine number	Division of Reclamation permit number
Central Silica Co. 806 Market St. P.O. Box 4477 Zanesville, OH 43702-4477 614-452-2775 James P. Snider, v. pres. & gen. mgr.	Millwood Sand Division (24) Central Silica Co. (31)	Knox Perry	sandstone sandstone	149,882 256,672	149,882 256,672	Kx-1 Py-202	IM-269 IM-14
Charlestown Sand & Gravel 7845 State Rte. 5 Ravenna, OH 44266 216-296-9233 Raymond C. Sommers, partner	Charlestown Sand & Gravel (259)	Portage	sand & gravel	36,347	36,347	Pe-17	IM-123
Chattin Concrete 9978 State Rte. 220 P.O. Box 49 Waverly, OH 45690 614-947-4677 William H. & Jeffery Chattin, partners	Chattin Concrete (253)	Pike	sand & gravel	6,865	9,159	Pke-23	IM-242
Chesterhill Stone Co. 773 East State Rte. 60 NE P.O. Box 599 McConnelsville, OH 43756 614-962-5621 Fred R. Price, pres.	Plant #2 (240) Plant #1 (75) Plant #3 (366)	Morgan Muskingum Washington	sand & gravel limestone sand & gravel	141,227 511,034 62,642	112,936 456,471 18,702	Mon-588 Mum-106 Wn-56	IM-35 IM-297 IM-857
Chesterville Sand & Gravel Co., Inc. State Rte. 95 E P.O. Box 51 Chesterville, OH 43317 419-768-3369 Carrol D. Gleason, pres.	Chesterville Sand & Gravel Co., Inc. (242)	Morrow	sand & gravel	112,032	112,032	Mw-10	IM-258
Christman Quarry 47278 Swazey Rd. Lewisville, OH 43754 614-838-2475 Gerald L. Christman, owner	Christman Quarry (69)	Monroe	limestone	80,946	80,946	Me-501	IM-76
Clark Clay Co. R.F.D. #6 Box 58 Millersburg, OH 44654 216-674-5150 Dwight S. Clark, owner	Clark Clay Co. (17)	Holmes	clay	7,564	6,144	Hs-56	
Claycraft Co. P.O. Box 866 Columbus, OH 43216 614-866-3300 P. W. Tefft, pres.	Claycraft Plant #4 Shale Pit (9) Claycraft Plant #1 Clay Pit (73)	Franklin Wyandot	shale clay	87,400 6,740	87,400 6,740	Fn-1 Wt-7	IM-322 IM-407
Cleveland Quarries Co. P.O. Box 261 Amherst, OH 44001-0261 216-986-4501 R. C. Bechtel, pres.	Birmingham Quarry (14) Amherst Quarries (27)	Erie Lorain	sandstone sandstone	2,305 115,286	2,305 115,286	Ee-21 Ln-3	IM-416 IM-415
Columbia Portland Cement Corp. P.O. Box 1531 Zanesville, OH 43701 614-849-2311 John Gilliland, plant mgr.	Lyle Quarry (76) (39)	Muskingum	limestone shale	¹¹ ¹¹		Mum-24 Mum-24	IM-830 IM-303
Con-Ag, Inc. Rte. 1 County Hwy. 66A N St. Marys, OH 45885 419-394-8870 Robert E. Hirschfeld & Lee Kuck, owners	Con-Ag, Inc. (10)	Auglaize	limestone	248,552	251,669	Ae-31	IM-744
Connolly Construction Co., Inc. 825 W. Sixth St. P.O. Box 271 Marysville, OH 43040 513-644-8831 Phillip Connolly, pres.	East Liberty Quarry (49)	Logan	limestone	742,571	742,571	Lgn-1	IM-574

¹¹No report filed in 1989.

1989 OHIO ALPHABETICAL DIRECTORY OF INDUSTRIAL-MINERAL MINE OPERATORS—Continued

Name, address, telephone number, and president/owner/manager of company	Name of mine (and map location number)	County	Commodity	1989 sales (tons)	1989 production (tons)	State mine number	Division of Reclamation permit number
Conotton Valley Quarries Co. 40580 Cadiz-Piedmont Rd. Cadiz, OH 43907 614-942-4656 Nick J. Puskarich, pres.	Conotton Valley Quarries Co. (1)	Carroll	sandstone	1,278	1,278	Cl-102	IM-278
Cooper Sand & Gravel P.O. Box 427 Russells Point, OH 43348 513-843-3426 Kenneth C. Cooper, partner	Cooper Sand & Gravel (411)	Logan	sand & gravel	8,270	4,618	Lgn-40	IM-996
Cox Gravel Co., Inc. P.O. Box 127 Dresden, OH 43821 614-754-2011 Richard Cox, pres.	Jennings-Lacy (244) Prospect (243)	Muskingum Muskingum	sand & gravel sand & gravel	118,107 74,714	106,631 115,848	Mum-799 Mum-863	IM-317 IM-264
Crates Excavating 14628 State Rte. 31 Kenton, OH 43326 419-675-1558 J. Roger & Ruth Crates, owners	Crates #1 (406)	Hardin	sand & gravel	¹²		Hdn-5	IM-907
Cravat Coal Co. 40580 Cadiz-Piedmont Rd. Cadiz, OH 43907 614-942-4656 Anthony Puskarich, pres.	Dover Pit (13)	Belmont	limestone	34,514	28,273	Bt-119	IM-733
Cremeans Concrete & Supply Georges Creek Rd. P.O. Box 475 Gallipolis, OH 45631 614-446-1142 Frank A. Cremeans, pres.	Cremeans Concrete & Supply (440)	Gallia	sand & gravel	1,793	1,793	Ga-626	IM-1046
Crooksville Coal Co., Inc. P.O. Box 149 Crooksville, OH 43731 614-982-6651 Ralph L. Allen, pres.	Clark #1 (137)	Perry	limestone	¹²		Py-330	IM-898
R. A. Cruise Sand & Gravel, Inc. 7639 State Rte. 14 R.D. #4 Ravenna, OH 44266 216-296-4087 Larry R. Cruise, pres.	R. A. Cruise Sand & Gravel, Inc. (261)	Portage	sand & gravel	45,228	116,123	Pe-45	IM-139
Cummins Family Contracting 7703 Twp. Rd. 207 DeGraff, OH 43318 513-585-4032 Richard E. Cummins, owner	Cummins Family Contracting (190)	Logan	sand & gravel	832	832	Lgn-38	IM-881
Cunningham Asphalt Paving, Inc. P.O. Box 370 Wheelersburg, OH 45694 614-574-6184 Karl Cunningham, pres.	Cunningham Pit (304)	Scioto	sand & gravel	¹²		So-83	IM-211
D & D Sand Bank Rte. 7 Box 473 South Point, OH 45680 614-377-4765 Dale M. Pemberton, owner	D & D Sand Bank (388)	Lawrence	sand & gravel	¹³		Le-445	IM-928
D & J Energy, Inc. Rte. 1 Box 351 Bidwell, OH 45614 614-245-5316 John P. Holley, pres.	D & J Energy, Inc. (46)	Jackson	limestone	¹²		Jkn-583	IM-894
D & W Sand & Gravel 10677 Wren Rd. Mechanicsburg, OH 43044 513-834-2548 Dale Potter, owner	D & W Sand & Gravel (49)	Champaign	sand & gravel	¹³		Cpn-21	IM-616

¹²No sales or production.¹³No report filed in 1989.

1989 OHIO ALPHABETICAL DIRECTORY OF INDUSTRIAL-MINERAL MINE OPERATORS—Continued

Name, address, telephone number, and president/owner/manager of company	Name of mine (and map location number)	County	Commodity	1989 sales (tons)	1989 production (tons)	State mine number	Division of Reclamation permit number
Davis Sand & Gravel 311 Mt. Zion Rd. SW Lancaster, OH 43130 614-687-1876 Richard P. Davis, owner	Davis Sand & Gravel (91)	Fairfield	sand & gravel	¹⁴		Fd-12	IM-451
Davon, Inc. 4281 Roush Rd. Hillsboro, OH 45133 513-393-4211 John B. Patton, pres.	Plum Run Stone Division (1) Highland Stone Division (41)	Adams Highland	limestone limestone	987,707 591,911	1,244,193 520,527	Ads-1 Hd-2	IM-237 IM-230
Daniel E. Demmy 4999 Tecumseh Rd. Springfield, OH 45502 513-325-9429 Daniel E. Demmy, pres.	Kieffer Pit (385)	Clark	sand & gravel	20,394	20,394	Ck-501 ¹⁵	IM-340
Demmy Sand & Gravel 4324 Fairfield Pike Springfield, OH 45502 513-325-8840 Woodrow Demmy, owner	Demmy Sand & Gravel (54)	Clark	sand & gravel	6,836	6,836	Ck-502	IM-375
Dennis Clay Co. State Rte. 37 P.O. Box 10922 New Lexington, OH 43764 614-342-5269 Tom L. Dennis, owner	Corder Mine (74) Olson Mine (43)	Muskingum Perry	clay clay	12,678 4,767	14,941 5,367	Mum-D ¹⁶ Py-296	IM-917 IM-37
A. J. Diana Sons, Inc. 1916 Erie Ave. NW P.O. Box 488 Massillon, OH 44648 216-832-5904 Virgil V. Diana, pres.	Neidert Pit (320)	Stark	sand & gravel	10,664	0	Sk-694	IM-858
Dingledine Trucking Service 4560 Oxford-Trenton Rd. Oxford, OH 45056 513-726-5258 Gerald Dingledine, owner	Dingledine Trucking Service (32)	Butler	sand & gravel	27,066	31,383	Br-50	IM-739
Dome Minerals, Inc. P.O. Box 11 Hanoverton, OH 44423 216-223-1413 Fred A. Rogers, pres.	Dome Minerals, Inc. (79)	Columbiana	shale	3,472	3,472	Ca-947	IM-935
Dravo Basic Materials Co., Inc. 5253 Wooster Rd. Cincinnati, OH 45226 513-321-2700 H. Donovan Ross, pres.	Fairfield Plant (33) Ross Plant (34) Cleves Plant (126) Camp Dennison Plant (127) Newtown Plant (128) Cleves Plant (131) Newtown Plant (128) Apple Grove Plant (209) South Lebanon Plant (352)	Butler Butler Hamilton Hamilton Hamilton Hamilton Hamilton Meigs Warren	sand & gravel sand & gravel sand & gravel sand & gravel sand & gravel sand & gravel sand & gravel sand & gravel sand & gravel	43,841 356,619 ¹⁷ 801,795 1,005,729 383,871 ¹⁸ 0 ¹⁷	0 597,932 778,448 1,095,748 431,586 6,740	Br-14 Br-29 Hmn-3 Hmn-5 Hmn-11 Hmn-68 Hmn-70 Ms-205 Wan-41 ¹⁹	IM-147 IM-149 IM-137, IM-801 IM-148 IM-133 IM-747 IM-133 IM-30 IM-629
Dry Creek Gravel Co. 2097 Mt. Vernon Rd. Newark, OH 43055 614-366-3333 Gail Wolfe, pres.	Plant #2 (176) Water Works (400) Plant #3 (177)	Licking Licking Licking	sand & gravel sand & gravel sand & gravel	182,500 78,000 175,300	193,500 78,000 173,800	Lg-31 Lg-502 Lg-DC ¹⁶	IM-246 IM-956 IM-354
C. E. Duff & Son, Inc. 9042 State Rte. 117 P.O. Box 265 Huntsville, OH 43324 513-686-2488 James E. Duff, pres.	Portable (444) C. E. Duff & Son, Inc. (50) Duff Sand Co. (182) C. E. Duff & Son, Inc. (420) C. E. Duff & Son, Inc. (183)	Logan Logan Logan Logan Logan	sand & gravel limestone sand & gravel sand & gravel sand & gravel	¹⁷ 298,214 124,432 9,323 4,664	298,214 124,432 9,323 4,664	Lgn-12 Lgn-15 Lgn-31 Lgn-36 Lgn-39	IM-1193 IM-453 IM-454 IM-1007 IM-887

¹⁴No report filed in 1989.¹⁷This mine was operated 1st and 2nd quarters 1989 by William H. Young and 3rd and 4th quarters by Daniel E. Demmy.¹⁶No mine number has been assigned by the Division of Mines.¹⁷No sales or production.¹⁸All sales and production are reported under Hmn-11.¹⁹See also Carl E. Oeder & Sons Sand & Gravel.

1989 OHIO ALPHABETICAL DIRECTORY OF INDUSTRIAL-MINERAL MINE OPERATORS—Continued

Name, address, telephone number, and president/owner/manager of company	Name of mine (and map location number)	County	Commodity	1989 sales (tons)	1989 production (tons)	State mine number	Division of Reclamation permit number
Earth & Wood Landscape Supplies, Inc. 5335 Strausser St. North Canton, OH 44720 216-499-8309 Craig C. Snee, pres.	R. O. Snee (8) (454)	Stark	peat sand & gravel	20 250	20 400	Sk-242	IM-466
East Ohio Limestone Co. P.O. Box 699 Hartville, OH 44632 216-877-2636 Donald D. Phillips, pres.	East Ohio Limestone Co. (113) (52)	Stark	limestone clay	140,384 ²⁰	142,454	Sk-663	IM-5
Eberhart Coal, Inc. Rte. 2 Box 32 Dover, OH 44622 216-343-5677 Phillip H. Eberhart, pres.	Eberhart #2 Hott Strip (78) (78)	Tuscarawas	clay shale	10,507 2,450	10,507 2,450	Ts-1994	IM-985
	Eberhart #2 Hott Strip (84)	Tuscarawas	clay	1,890	1,890	Ts-1998	D-0735
R. A. Eberts Co., Inc. P.O. Box 191 Jackson, OH 45640 614-286-2975 Phil A. Bowman, William R. Parks, and T. L. Darlington, Jr., owners	Diamond Stone (9)	Athens	limestone	307,110	307,110	As-533	IM-17
Elm Spring Farm 938 State Rte. 207 Chillicothe, OH 45601 614-775-5525 Joanna J. Haskins, owner	Elm Spring Farm (297)	Ross	sand & gravel	²⁰		Rs-26	IM-922
M. T. Epling Co. 1725 Eastern Ave. Gallipolis, OH 45631 614-446-2742 M. T. Epling, pres.	Georges Creek Pit (105) M. T. Epling Sand & Gravel Plant (106)	Gallia Gallia	sand & gravel sand & gravel	5,480 ²⁰	5,480	Ga-243 Ga-245	IM-238
Erie Blacktop, Inc. 4507 Tiffin Ave. P.O. Box 2308 Sandusky, OH 44870 419-625-7374 Dean Wikel, pres.	Erie Blacktop Quarry (24) Erie Blacktop Sand & Gravel Pit (417)	Erie Huron	limestone sand & gravel	210,345 63,511	270,186 56,298	Ee-27 Hrn-16	IM-608 IM-975
Erie Sand & Gravel Co. P.O. Box 153 Erie, PA 16512-0153 814-453-6721 Sidney E. Smith, Jr., pres.	Erie Sand & Gravel Co. (1)	Lake Erie	sand & gravel (dredged)	124,659	124,659	Ee-D ²¹	
Ernst Material Service, Inc. 3361 Successful Way Dayton, OH 45414 513-878-1667 John Ernst, pres.	Ernst Material Service, Inc. (429)	Warren	sand & gravel	104,714	104,714	Wan-46	IM-679
Fairfield Ready Mix P.O. Box 9175 Fairfield, OH 45014 513-868-7878 Rex Allan, owner	Fairfield Ready Mix (36)	Butler	sand & gravel	417,369	974,601	Br-53	IM-903
Feikert Sand & Gravel, Inc. 6971 County Rd. 189 Rte. 5 P.O. Box 365 Millersburg, OH 44654-9186 216-674-0038 Mabel L. Feikert, owner	Feikert Sand & Gravel, Inc. (154)	Holmes	sand & gravel	60,114	60,114	Hs-511	IM-345
Fenner Sand & Gravel, Inc. 7131 W. Fenner Rd. Ludlow Falls, OH 45339 513-698-7048 Robert P. Snead, pres.	Woodville Concrete Corp. (222)	Miami	sand & gravel	188,000	189,000	Mi-4	IM-472

²⁰No sales or production.²¹No mine number has been assigned by the Division of Mines.

1989 OHIO ALPHABETICAL DIRECTORY OF INDUSTRIAL-MINERAL MINE OPERATORS—Continued

Name, address, telephone number, and president/owner/manager of company	Name of mine (and map location number)	County	Commodity	1989 sales (tons)	1989 production (tons)	State mine number	Division of Reclamation permit number
Ferris Coal Co., Inc. 371 South St. East Palestine, OH 44413 216-426-9680 Theresa Ferris, pres.	Ferris Coal Co., Inc. (4) (4)	Columbiana	clay shale	²² 22		Ca-505	IM-13
Fleckenstein Farm Gravel Pit 11251 State Rte. 66 Minster, OH 45865 513-295-2417 Ferd J. Fleckenstein, owner	Fleckenstein Farm Gravel Pit (310)	Shelby	sand & gravel	10,579	10,579	Shy-12	IM-528
Fleming Construction Co., Inc. P.O. Box 31 Marion, OH 43302 614-494-2476 Gerald E. Fleming, pres.	Fleming Construction Co., Inc. (197) Fleming Construction Co., Inc. (423)	Marion Marion	sand & gravel sand & gravel	3,233 ²⁴	1,832	Mn-16 ²³ Mn-F ²⁵	IM-171 IM-990
Flesher Sand & Gravel, Inc. 3322 Clark Mill Rd. Norton, OH 44203 216-745-9239 Dallas Flesher, owner	Flesher Sand & Gravel, Inc. (327)	Summit	sand & gravel	4,123	4,123	St-52	IM-900
Fourereman's Sand & Gravel, Inc. 2791 Wildcat Rd. Greenville, OH 45331 513-548-8626 Gary B. Fourereman, pres.	Fourereman's Sand & Gravel, Inc. (80)	Darke	sand & gravel	37,861	37,861	Dke-4	IM-433
The France Stone Co. 8130 Brint Rd. P.O. Box 278 Sylvania, OH 43560-0278 419-882-0123 Glenn E. Sherman, exec. v. pres.	Waterville (52) Silica (53) Paulding (86) Bellevue (100) Flat Rock (107) Bloomville (108) North Baltimore (128) Custar (129)	Lucas Lucas Paulding Sandusky Seneca Seneca Wood Wood	limestone limestone limestone limestone limestone limestone limestone limestone	466,792 1,016,583 245,757 ²⁴ 1,158,377 326,600 ²⁴ 301,767	510,610 1,040,303 262,256 ²⁴ 1,406,312 472,268 ²⁴ 313,696	Ls-1 Ls-3 Pg-7 Sy-6 Sa-1 Sa-3 Wd-2 Wd-5	IM-575 IM-580 IM-346 IM-347 IM-349 IM-576 IM-473
Fredericktown Sand & Gravel Co. P.O. Box 112 Fredericktown, OH 43019 614-694-2096 Richard R. Stander, pres.	Fredericktown Sand & Gravel Co. (159)	Knox	sand & gravel	²²		Kx-13	IM-343
Frye Sand & Gravel, Inc. 3049 S. Denmark Rd. P.O. Box 3 Dorset, OH 44032 216-858-2627 Harold L. Frye, owner	Frye Sand & Gravel, Inc. (9)	Ashtabula	sand & gravel	2,163	2,163	Asa-10	IM-198
Fuhrer Farms & Mining 258 Ninth St. SW Strasburg, OH 44680 216-878-5256 Jack Fuhrer, partner	Fuhrer Farms & Mining (136)	Tuscarawas	limestone	²⁴		Ts-1961	IM-845
G & M Supply, Inc. dba Clinton Stone, Inc. 1203 N. Pennsylvania Ave. P.O. Box 468 Wellston, OH 45692 614-384-5659 Bonny A. Huffman, pres.	Sands Hill Strip (124)	Vinton	limestone	262,618	262,618	Vn-174	D-0309
Ganges Gravel 153 North Gambel St. P.O. Box 42 Shelby, OH 44875 419-342-5361 J. J. Scott, owner	Ganges Gravel (289)	Richland	sand & gravel	²²		Rd-18	IM-670
John L. Garber Materials, Inc. Rte. 8 Lexington, OH 44904 419-884-1567 John L. Garber, pres.	John L. Garber Materials, Inc. (290)	Richland	sand & gravel	248,556	253,470	Rd-14	IM-436

²²No report filed in 1989.²³This mine was operated 1st through 3rd quarters 1989 by Fleming Construction Co., Inc., and 4th quarter by Scioto Sand & Gravel.²⁴No sales or production.²⁵No mine number has been assigned by the Division of Mines.

1989 OHIO ALPHABETICAL DIRECTORY OF INDUSTRIAL-MINERAL MINE OPERATORS—Continued

Name, address, telephone number, and president/owner/manager of company	Name of mine (and map location number)	County	Commodity	1989 sales (tons)	1989 production (tons)	State mine number	Division of Reclamation permit number
General Clay Products Corp. P.O. Box 236 Baltic, OH 43804-0236 216-897-7171 Harold B. Epler, Jr., pres.	Drescher Pit (6) (6) Troyer Pit (18)	Coshocton Holmes	clay shale shale	875 645 3,164	875 645 3,164	Cn-787 Hs-77	IM-610 IM-545
General Clay Products Corp. P.O. Box 550 Logan, OH 43138 614-385-5616 Harold B. Epler, Jr., pres.	General Clay Products Corp. (12) (12)	Hocking	clay shale	22,624 13,161	22,624 13,161	Hg-205	IM-21
General Clay Products Corp. P.O. Box 340 Wadsworth, OH 44281 216-335-1515 Harold B. Epler, Jr., pres.	General Clay Products Corp. (37)	Medina	shale	43,405	43,405	Ma-6	IM-455
Gerken Materials, Inc. P.O. Box 607 Napoleon, OH 43545 419-533-2421 Julian A. Gerken, pres.	Gerken Materials, Inc. (147)	Henry	sand & gravel	114,460	114,460	Hy-5	
Gibson Sand & Gravel Co. 1385 Knorr Rd. Galion, OH 44833 419-468-5527 Arthur T. Gibson, owner	Gibson Sand & Gravel Co. (75)	Crawford	sand & gravel	²⁶		Cd-3	IM-693
Glen-Gery Corp. County Rd. 9 P.O. Box 207 Iberia, OH 43325 419-468-5002 Richard Boxall, pres.	Glen-Gery Corp. (36)	Marion	shale	225,359	225,359	Mn-7	IM-309
Goodwin Sand & Gravel, Inc. 126 S. Norton St. Mt. Vernon, OH 43050 614-392-7971 Don E. Mill, pres.	Goodwin Sand & Gravel, Inc. (160)	Knox	sand & gravel	190,450	195,000	Kx-7	IM-235
Gottron Bros. Co. 100 South Stone St. Fremont, OH 43420 419-332-5281 Harry P. Gottron, Jr., v. pres.	Gottron Bros. Co. (101)	Sandusky	limestone	103,309	76,580	Sy-5	IM-259
The Gravel Co. 325 Clark Rd. P.O. Box 15501 Cincinnati, OH 45215 513-761-4980 Roy B. Schweitzer, pres.	The Gravel Co. (141)	Hamilton	sand & gravel	²⁶		Hmn-28 ²⁷	IM-353
Green Oaks Potting Products 2222 Lake Rockwell Rd. Ravenna, OH 44266 216-296-2157 Roy Huffman, pres.	Green Oaks Potting Products (7) (451)	Portage	peat sand & gravel	950 50	2,850 150	Pe-89	
Gregory Materials Co. 14133 U.S. Rte. 23 N Waverly, OH 45690 614-947-5559 Ernest Gregory, owner	Plant #1 (254)	Pike	sand & gravel	²⁶		Pke-30	IM-786
Gregory Stone Co., Inc. 3244 S. Davis Rd. Ludlow Falls, OH 45339 513-275-7455 William T. Gregory, Jr., pres.	Gregory Quarry (65)	Miami	limestone	2,032	2,032	Mi-16	IM-414
Gwin Contracting Co. P.O. Box 205 Columbiana, OH 44408 216-482-2442 Lyle D. Gwin, pres.	Gwin Contracting Co. (30)	Mahoning	sandstone	23,137	23,137	Mg-62	IM-599

²⁶No report filed in 1989.²⁷This mine was operated 1st through 3rd quarters 1989 by Three Rivers Sand & Gravel, Inc., and 4th quarter by The Gravel Co.

1989 OHIO ALPHABETICAL DIRECTORY OF INDUSTRIAL-MINERAL MINE OPERATORS—Continued

Name, address, telephone number, and president/owner/manager of company	Name of mine (and map location number)	County	Commodity	1989 sales (tons)	1989 production (tons)	State mine number	Division of Reclamation permit number
H & H Utilities Co. 7307 S. Kessler-Frederick Rd. West Milton, OH 45383 513-223-6752 Gerald Hochwalt, pres.	H & H Gravel (229)	Montgomery	sand & gravel	²⁸		My-68	IM-646
J. M. Hamilton & Sons Co., Inc. 1974 Marion-Bucyrus Rd. Marion, OH 43302 614-382-2189 O. E. & A. M. Hamilton, owners	J. M. Hamilton & Sons Co., Inc. (59)	Marion	limestone	101,473	101,473	Mn-2	IM-423
Hard Rocks, Inc. 9340 State Rte. 5 NE Kinsman, OH 44428 216-876-1565 Daniel White, pres.	Hard Rocks, Inc. (40)	Trumbull	sandstone	29,825	39,840	Tl-13	IM-777
Hardin Quarry Co., Inc. 12484 State Rte. 701 Kenton, OH 43326 419-675-1327 Richard Pees, pres.	Hardin Quarry Co., Inc. (38)	Hardin	limestone	182,666	182,666	Hdn-2	IM-443
Harrison Sand & Gravel Co. 10980 Campbell Rd. Harrison, OH 45030 513-637-5174 Donald Gauck, mgr.	Harrison Sand & Gravel Co. (135)	Hamilton	sand & gravel	76,431	65,550	Hmn-17	IM-295
Haubeil & Sons Asphalt & Materials, Inc. 691 Marietta Pike Chillicothe, OH 45601 614-773-6358 Robert & George Haubeil, co-owners	Haubeil & Sons Asphalt & Materials, Inc. (298)	Ross	sand & gravel	12,771	12,771	Rs-24	IM-735
Haueter Sand & Gravel, Inc. P.O. Box 206 Chardon, OH 44024 216-286-9482 Donald H. Haueter, pres.	Haueter Sand & Gravel, Inc. (108)	Geauga	sand & gravel	193,201	193,201	Gea-29	IM-215
Heiser Sand & Gravel P.O. Box 2491 North Canton, OH 44720 216-499-8201 Richard L. Heiser, owner	Heiser Sand & Gravel (323)	Stark	sand & gravel	47,439	43,016	Sk-688	IM-763
Heiser Stone Co. P.O. Box 2491 North Canton, OH 44720 216-499-8201 Richard L. Heiser, owner	Heiser Stone Co. (55) Heiser Stone Co. (397)	Mahoning Tuscarawas	limestone sand & gravel	²⁹ ²⁹		Mg-43 Ts-1977	IM-723 IM-692
Hillsdale Sand & Gravel, Inc. P.O. Box 223 Archbold, OH 43502 419-445-1015 Dean Miller, pres.	Hillsdale Sand & Gravel, Inc. (82)	Defiance	sand & gravel	20,300	0	De-2	IM-765
Hilltop Aggregate, Inc. P.O. Box 362 Mogadore, OH 44260 216-628-4000 Robert W. West, pres.	Hilltop Aggregate, Inc. (262)	Portage	sand & gravel	331,747	331,747	Pe-56	IM-127
Hilltop Basic Resources, Inc. 630 Vine St. Cincinnati, OH 45202 513-651-5000 Thomas D. Harrington, pres.	Fairborn Aggregate Plant (112) West Carrollton Aggregate Plant (232)	Clark, Greene Montgomery	sand & gravel sand & gravel	577,488 543,617	457,003 586,917	Ge-4 My-19	IM-394 IM-401
Hilltop Basic Resources, Inc. dba Enon Washed Sand & Gravel Co. 1665 Enon-Donnelsville Rd. P.O. Box 363 Enon, OH 45323 513-299-6058 Thomas D. Harrington, pres.	Enon Washed Sand & Gravel Co. (57)	Clark	sand & gravel	135,515	144,396	Ck-3	IM-463

²⁸No report filed in 1989.²⁹No sales or production.

1989 OHIO ALPHABETICAL DIRECTORY OF INDUSTRIAL-MINERAL MINE OPERATORS—Continued

Name, address, telephone number, and president/owner/manager of company	Name of mine (and map location number)	County	Commodity	1989 sales (tons)	1989 production (tons)	State mine number	Division of Reclamation permit number
Hocking County Engineer 1286 California Ave. Logan, OH 43138-8999 614-385-8543 Douglas A. Neff, admin. asst.	Hocking County Gravel Pit (150)	Hocking	sand & gravel	³⁰		Hg-296	IM-559
Hocking Valley Concrete, Inc. 35255 Hocking Dr. Logan, OH 43138 614-385-2165 William G. Vaughn, pres.	Hocking Valley Concrete, Inc. (151)	Hocking	sand & gravel	³¹		Hg-262	IM-41
Tom Hollinger Excavating 2097 Hollansburg-Arcanum Rd. New Madison, OH 45346 513-996-5381 Thomas W. Hollinger, leasee	Hollinger Gravel Plant (81)	Darke	sand & gravel	1,892	1,892	Dke-10	IM-326
Holmes Limestone Co. P.O. Box 295 Berlin, OH 44610 216-893-2721 E. E. Mullet, pres.	241 Plant (44) (19) Wayne Mines (45)	Holmes	limestone clay	59,127 13,917	59,127 13,917	Hs-67	IM-768
	Bolivar Mine (76)	Holmes, Wayne Stark	limestone clay	187,560 26,571	187,560 26,571	Hs-79 ³² Sk-235	IM-656 IM-945
Honey Creek Stone Co. P.O. Box 286 Petersburg, OH 44454 216-542-2372 D. B. Carson, pres.	Honey Creek Stone Co. (56)	Mahoning	limestone	199,698	209,780	Mg-54	IM-93
Huck Farms R.F.D. 3 McConnelsville, OH 43756 614-962-3467 Louis & Cecil Huck, partners	Huck Farms (241)	Morgan	sand & gravel	³⁰		Mon-599	
Hugo Sand Co. 7055 State Rte. 43 Kent, OH 44240 216-673-4710 Dorothy M. Strohm, pres.	Hugo Sand Co. (264)	Portage	sand & gravel	254,495	254,495	Pe-10	IM-138
Humphrey Farms P.O. Box 128 Reedsville, OH 45772-0128 614-378-6295 C. Ed Humphrey, owner	Vivian Humphrey (210)	Meigs	sand & gravel	482	482	Ms-295	
Hydraulic Press Brick Co. 8900 Hemlock Rd. P.O. Box 31330 Independence, OH 44131 314-621-9306 W. W. Allen, Jr., pres.	Hydraulic Press Brick Co. (7)	Cuyahoga	shale	233,754	245,523	Cya-19	IM-95
Indian Creek Sand & Gravel Co. P.O. Box 330 Oxford, OH 45056 513-523-8805 Gaston Bowling, pres.	Indian Creek Sand & Gravel Co. (37)	Butler	sand & gravel	23,220	23,220	Br-40	IM-493
International Salt Co. 2065 Manchester Rd. Akron, OH 44309-0149 216-745-0031 John L. Ryon, Jr., pres.	International Salt Co. (4)	Summit	salt	208,506	212,948	St-9127	
J. P. Sand & Gravel Co. 5911 Lockbourne Rd. P.O. Box 2 Lockbourne, OH 43137 614-497-0083 Richard A. Roberts, pres.	J. P. Sand & Gravel Co. (98)	Franklin	sand & gravel	615,829	615,829	Fn-52	IM-191
Janson Soil Service, Inc. 1492 Mechanicsville Rd. Rock Creek, OH 44084 216-466-3835 Peter E. Janson, Jr., pres.	Janson Soil Service, Inc. (10) (82)	Ashtabula	sand & gravel shale	³⁰ 500	 500	Asa-14	IM-563

³⁰No sales or production.³¹No report filed in 1989.³²All sales and production are from Wayne County.

1989 OHIO ALPHABETICAL DIRECTORY OF INDUSTRIAL-MINERAL MINE OPERATORS—Continued

Name, address, telephone number, and president/owner/manager of company	Name of mine (and map location number)	County	Commodity	1989 sales (tons)	1989 production (tons)	State mine number	Division of Reclamation permit number
Jarrett Sand Co. 6505 Skadden Rd. Sandusky, OH 44870 419-359-1750 James Jarrett, owner	Jarrett Sand Co. (84)	Erie	sand & gravel	4,433	4,433	Ee-29	
Jefferson Materials Co. 8505 State Rte. 14 Streetsboro, OH 44241 216-626-3816 John E. Lower, pres.	Howitt (265)	Portage	sand & gravel	201,909	189,209	Pe-63	IM-82
Joseph Sand & Gravel Rte. 6 Boundary Rd. Wapakoneta, OH 45895 419-568-3787 Mary J. Joseph, owner	Joseph Sand & Gravel (23)	Auglaize	sand & gravel	10,159	10,159	Ae-23	IM-508
Karg Sand & Gravel Co. 2088 Congress Lake Rd. Mogadore, OH 44260 216-673-1338 Thomas R. Karg, owner	Karg Sand & Gravel Co. (266)	Portage	sand & gravel	23,600	16,500	Pe-83	IM-179
Keener Sand & Clay Co. 330 Dering Ave. Columbus, OH 43207 614-444-1105 Carl F. Weiffenbach, pres.	Huron Plant (85)	Erie	sand & gravel	1,232	1,232	Ee-5	
Kimble Clay & Limestone Co. Rte. 1 Box 386 Dover, OH 44622 216-343-1226 Floyd E. Kimble, owner	Kimble Clay & Limestone Co. (117) (41) (63) (63)	Tuscarawas	limestone sandstone clay shale	99,989 11,005 642,673 856,822	99,989 11,005 642,673 856,822	Ts-1818	IM-9
King Limestone, Inc. 53681 Spencer Rd. Cumberland, OH 43732 614-638-3942 Duane King, pres.	King Limestone, Inc. (147) King Limestone, Inc. (79)	Guernsey, Muskingum Noble	limestone limestone	39,600 97,600	39,600 97,600	Gy-309 Ne-106	IM-1030 IM-85
Kinsman Sand & Gravel Co. P.O. Box B Kinsman, OH 44428 216-293-5400 Glenn B. Harnett, pres.	Kinsman Sand & Gravel Co. (11)	Ashtabula	sand & gravel	147,563	151,000	Asa-17	IM-886
Kipp's Gravel Co., Inc. 4987 State Rte. 222 Batavia, OH 45103 513-732-1024 Melvin M. Kipp, pres.	Kipp's Gravel Co., Inc. (61)	Clermont	sand & gravel	99,708	99,708	Ct-7	IM-432
Kirby's Sand & Gravel, Inc. 4876 County Hwy. 43 Upper Sandusky, OH 43351 419-927-2260 Noble A. Kirby, owner	Kirby's Sand & Gravel, Inc. (382)	Wyandot	sand & gravel	43,693	43,693	Wt-17	IM-604
Charles Kishler P.O. Box 5275 Junction City, OH 43748 614-385-5371 Charles L. Kishler, owner	Kishler Coal & Clay Co. (45) (45)	Perry	clay shale	³³ ³³		Py-297	IM-850
Kohl Industries Rte. 1 Box 1083 New Philadelphia, OH 44663 216-874-4748 Jerry K. Kohl, owner	Black Hawk (114) (2) (53) (53)	Stark	limestone sandstone clay shale	696 ³⁴ 1,106 ³⁴	46,696 14,606	Sk-217	IM-750
Kosmos Cement Co. P.O. Box 72319 Louisville, KY 40272 502-935-7331 K. R. Blakely, controller	Bear Run (30)	Lawrence	shale	³⁴		Le-308	IM-31

³³No report filed in 1989.³⁴No sales or production.

1989 OHIO ALPHABETICAL DIRECTORY OF INDUSTRIAL-MINERAL MINE OPERATORS—Continued

Name, address, telephone number, and president/owner/manager of company	Name of mine (and map location number)	County	Commodity	1989 sales (tons)	1989 production (tons)	State mine number	Division of Reclamation permit number
Edward Kraemer & Sons, Inc. Bolander Rd. Clay Center, OH 43408 419-855-8388 David R. Kraemer, pres.	White Rock Quarry (82)	Ottawa	limestone	987,823	857,493	Oa-6	IM-296
L & I Trucking & Construction, Inc. 1842 Adams Rd. Loveland, OH 45140 513-683-2045 Alvin Walker, pres.	L & I Trucking & Construction, Inc. (357) L & I Trucking & Construction, Inc. (430)	Warren Warren	sand & gravel sand & gravel	196,089 138,299	158,866 138,299	Wan-8 Wan-50	IM-240 IM-1006
L. & M. Excavators, Inc. 6075 Cleveland Ave. #205 Columbus, OH 43231 614-895-1056 Charles L. Lewis, pres.	Westerville Industrial Park (99)	Franklin	sand & gravel	47,231	26,691	Fn-54	IM-847
L. & M. Mineral Co. Star Rte. P.O. Box 54 Millersburg, OH 44654 216-893-2227 E. E. Mullet, pres.	Evans (64) Luikert (65) Holmes (66) Spring (77) (77)	Tuscarawas Tuscarawas Tuscarawas Tuscarawas	shale clay shale clay shale	1,304 22,250 51,268 11,075 ³⁵	1,304 22,250 51,268 11,075	Ts-1884 Ts-1914 Ts-1981 Ts-1982	IM-6 D-0701 IM-741 IM-621
Lafarge Corp. Great Lakes Region P.O. Box 160 Paulding, OH 45879 419-399-4861 Bertrand Collomb, pres.	Paulding Quarry (87) (42)	Paulding	limestone clay	316,478 115,048	316,478 115,048	Pg-1	IM-513
Lake Hope Asphalt, Inc. State Rte. 278 P.O. Box 38 Nelsonville, OH 45764 614-753-1005 Francis Efaw, pres.	Lake Hope Asphalt, Inc. (21)	Athens	sand & gravel	11,472	26,865	As-1161	IM-97
Lakeside Sand & Gravel Co. 3431 Frost Rd. Mantua, OH 44255 216-274-2569 Larry Kotkowski, partner	Lakeside Sand & Gravel Co. (268)	Portage	sand & gravel	146,245	146,245	Pe-40	IM-190
Lancaster Sand & Gravel Co. 3232 Logan-Lancaster Rd. SE Lancaster, OH 43130 614-246-6315 Don E. Mill, pres.	Lancaster Sand & Gravel Co. (92)	Fairfield	sand & gravel	322,321	384,376	Fd-13	IM-848
Latham Limestone, Inc. P.O. Box 77 Latham, OH 45646 614-493-2677 Robert Murray, pres.	Latham Limestone, Inc. (91)	Pike	limestone	256,707	250,742	Pke-13	IM-213
Lazy Acre Farms, Inc. 1030 Forest Ave. Zanesville, OH 43701 614-453-1003 Clarence M. Parsons, owner	Lazy Acre Farms, Inc. (396)	Muskingum	sand & gravel	³⁶		Mum-261	IM-957
Lerkis Asphalt Co., Inc. 550 Dan St. Akron, OH 44310 216-376-7560 Gus J. Lerakis, pres.	Minor Rd. Plant (328)	Summit	sand & gravel	4,945	4,945	St-39	IM-983
Lingvai Peat Co. R.R. 2 01693 Rd. 8 Edgerton, OH 43517 419-298-2058 Ronald Lingvai, mgr.	Lingvai Peat Co. (4)	Williams	peat	28	0	Ws-17	
London Tile Co. 65 Walnut St. New London, OH 44851 419-929-1551 R. N. Danison, pres.	Biglow (1)	Ashland	shale	2,596	2,596	Ald-1	IM-334

³⁵No sales or production.³⁶No report filed in 1989.

1989 OHIO ALPHABETICAL DIRECTORY OF INDUSTRIAL-MINERAL MINE OPERATORS—Continued

Name, address, telephone number, and president/owner/manager of company	Name of mine (and map location number)	County	Commodity	1989 sales (tons)	1989 production (tons)	State mine number	Division of Reclamation permit number
Luburgh, Inc. 4090 East Pike Zanesville, OH 43701 614-453-9003 Otto Luburgh, v. pres.	A. I. Ball Farm (410)	Muskingum	sand & gravel	³⁷		Mum-267	IM-914
Ludlow Stone, Inc. 3244 S. Davis Rd. Ludlow Falls, OH 45339 513-698-3043 Lloyd B. Fry, pres.	Ludlow Stone, Inc. (66)	Miami	limestone	349,038	272,081	Mi-502	IM-414
Ludowici-Celadon Co. P.O. Box 69 New Lexington, OH 43764 614-342-1995 Edward Ryser, pres.	Donnelly Pit (46)	Perry	shale	³⁸		Py-212	IM-58
MacRitchie Materials, Inc. P.O. Box 90 West Millgrove, OH 43467 419-288-2790 Donald B. MacRitchie, pres.	MacRitchie Materials, Inc. (130)	Wood	limestone	351,257	420,061	Wd-1	IM-548
Maple Grove Stone Co. P.O. Box 456 Tiffin, OH 44883 419-992-4235 Tim Bell, pres.	Maple Grove (106)	Seneca	limestone	119,603	119,603	Sa-2	IM-352
Marshall Quarry, Inc. 11199 State Rte. 124 Hillsboro, OH 45133 513-466-2636 Ronald M. Main, pres.	Marshall Quarry, Inc. (43)	Highland	limestone	6,527	6,527	Hd-4	IM-406
Donald Martin Contracting 1875 Roxanna-New Burlington Rd. Waynesville, OH 45068 513-862-4182 Roger J. Martin, operator	Donald Martin Contracting (403)	Greene	sand & gravel	143	125	Ge-40	IM-923
Martin Farms, Inc. 2993 Woodsdale Rd. Trenton, OH 45067 513-988-6318 James E. Martin, pres.	Martin Farms, Inc. (38)	Butler	sand & gravel	58,155	58,155	Br-52	IM-814
Martin Marietta Magnesia Specialties, Inc. Executive Plaza II Hunt Valley, MD 21030 301-667-0200 W. W. Appel, pres.	Woodville Quarry (102)	Sandusky	limestone	1,906,824	1,906,824	Sy-1	IM-537
Mason's Sand & Gravel Co. 2385 Rathmell Rd. Columbus, OH 43207 614-491-3611 Gordon Masteller, pres.	Mason's Sand & Gravel Co. (100)	Franklin	sand & gravel	47,941	47,941	Fn-11	IM-234
Massillon Washed Gravel Co. 6331 Blough Ave. SW P.O. Box 167 Navarre, OH 44662 216-879-2132 Thomas E. Thomas, pres.	Massillon Washed Gravel Co. (325)	Stark	sand & gravel	259,667	259,667	Sk-607	IM-102
Maumee Haulers, Inc. P.O. Box 107 Monclova, OH 43542 419-866-0400 Ike Parker, Jr., pres.	Eber Rd. Pit (422)	Lucas	sand & gravel	45,469	45,469	Ls-26	IM-1016
Maxville Quarries, Inc. 7957 State Rte. 668 S Logan, OH 43138 614-385-7087 David J. McCort, pres.	Maxville Quarries, Inc. (89)	Perry	limestone	198,033	198,033	Py-235	IM-11, IM-515

³⁷No report filed in 1989.³⁸No sales or production.

1989 OHIO ALPHABETICAL DIRECTORY OF INDUSTRIAL-MINERAL MINE OPERATORS—Continued

Name, address, telephone number, and president/owner/manager of company	Name of mine (and map location number)	County	Commodity	1989 sales (tons)	1989 production (tons)	State mine number	Division of Reclamation permit number
McCarthy Stone Quarry 6326 County Rd. 61 Upper Sandusky, OH 43351 419-294-2611 Charles H. McCarthy, owner	McCarthy Stone Quarry (133)	Wyandot	limestone	104,540	104,580	Wt-3	IM-298
Mecco, Inc. 2504 S. Main St. Middletown, OH 45042 513-422-3651 David T. Morgan, pres.	Mecco, Inc. (39)	Butler	sand & gravel	165,229	167,228	Br-15	IM-316
Mechanicsburg Sand & Gravel, Inc. 25 Mill St. P.O. Box 18 Mechanicsburg, OH 43044 513-834-2606 John D. Cushman, pres.	Mechanicsburg Sand & Gravel, Inc. (50)	Champaign	sand & gravel	122,043	108,989	Cpn-22	IM-889
Meigs County Commissioners Rte. 2 Rocksprings Rd. Pomeroy, OH 45769 614-992-2911 Henry Wells, county commissioner	Meigs County Pit (211)	Meigs	sand & gravel	24,880	24,880	Ms-301	IM-619
Melvin Stone Co. 228 Melvin Rd. Wilmington, OH 45177 513-584-2486 Craig Beam, pres.	Melvin Stone Co. (17) Melvin Stone Co. (28) Limestone, Inc. (92)	Clinton Fayette Pickaway	limestone limestone limestone	957,304 118,694 196,312	957,304 65,416 196,312	Cln-1 Fe-1 Pky-4	IM-241 IM-831 IM-209
Menuez Bros. Sand & Gravel, Inc. 5366 County Rd. 349 Rte. 1 Millersburg, OH 44654 216-674-4254 Joel Menuez, pres.	Fair Pit (153)	Holmes	sand & gravel	100,801	100,801	Hs-82	IM-707
Mesenburg Bros., Inc. R.D. 1 Collins, OH 44826 419-668-5691 Peter J. Mesenburg, pres.	Mesenburg Bros., Inc. (86) Mesenburg Bros., Inc. (20)	Erie Huron	sand & gravel sandstone	3,538 14,227	3,538 14,227	Ee-24 Hrn-8	IM-915 IM-268
Miami River Stone Co. 1556 Miami River Rd. Sidney, OH 45365 513-492-5412 Bradley Comer, gen. mgr.	Miami River Stone Co. (110) Miami River Stone Co. (311)	Shelby Shelby	limestone sand & gravel	199,533 658	222,445 0	Shy-6 Shy-17	IM-389 IM-389
Mickley Gravel Co. P.O. Box J Danville, OH 43014 614-599-7870 Paul A. Mickley, owner	Mickley Gravel Co. (162)	Knox	sand & gravel	5,808	0	Kx-5	IM-884
Miller Bros. Gravel, Inc. 7900 S. Kessler-Frederick Rd. Tipp City, OH 45371 513-698-7204 Thomas O. Miller, pres.	Miller Bros. Gravel, Inc. (233)	Montgomery	sand & gravel	187,596	170,679	My-52	IM-348
H. M. Miller Construction Co. 1225 Waterloo Rd. Mogadore, OH 44260 216-628-4811 J. C. Smith, pres.	Krumroy Pit (330)	Summit	sand & gravel	1,262	1,262	St-46	IM-557
Miller Sand & Gravel Co. State Rte. 82 Box 60 Windham, OH 44288 216-326-3157 Donald M. Miller, owner	Miller Sand & Gravel Co. (272)	Portage	sand & gravel	8,259	8,259	Pe-39	IM-174
Miller Sand Co. 5003 Bellevue-Castalia Rd. Castalia, OH 44824 419-684-7328 Todd C. Miller, owner	Miller Sand Co. (87)	Erie	sand & gravel	6,687	6,687	Ee-28	IM-601

1989 OHIO ALPHABETICAL DIRECTORY OF INDUSTRIAL-MINERAL MINE OPERATORS—Continued

Name, address, telephone number, and president/owner/manager of company	Name of mine (and map location number)	County	Commodity	1989 sales (tons)	1989 production (tons)	State mine number	Division of Reclamation permit number
Mohican Organic Products, Inc. Rte. 1, 47 Milligan Rd. Lucas, OH 44843 419-892-2212 Farley & Joyce Amos, owners	Mohican Pit (1)	Ashland	peat	³⁹		Ald-13	
Moore's Excavating Co. 2222 N. State Rte. 68 Urbana, OH 43078 513-653-6288 Ralph Moore, owner	Moore's Excavating Co. (51)	Champaign	sand & gravel	269,933	269,933	Cpn-20	IM-482
Morton Thiokol, Inc. Morton Salt Division P.O. Box 428 Grand River, OH 44045-0428 216-354-9901 Paul Blair, facility mgr.	Fairport Mine (2)	Lake	salt	1,520,927	1,499,355	Lke-6	
Morton Thiokol, Inc. Morton Salt Division 151 S. Industrial St. Rittman, OH 44270-1593 216-925-3015 Charles S. Locke, CEO	Morton Salt Well Field (5)	Wayne	salt	451,471	475,368	We-9129	
Muskingum River Gravel Co. P.O. Box 671 Zanesville, OH 43701 614-453-0721 Larry E. Young, v. pres.	Muskingum River Gravel Co. (152) Muskingum River Gravel Co. (247) Muskingum River Gravel Co. (448) Plant #1 (245) Muskingum River Gravel Co. (452) Plant #2 (367)	Hocking Muskingum Muskingum Muskingum Ross Washington	sand & gravel sand & gravel sand & gravel sand & gravel sand & gravel sand & gravel	85,000 100,000 ⁴⁰ ⁴⁰ 200,000 85,000	85,000 100,000 200,000 85,000	Hg-301 Mum-228 Mum-262 Mum-736 Rs-M ⁴¹ Wn-38	IM-458 IM-421 IM-422 IM-804 IM-114 IM-701
National Lime & Stone Co. P.O. Box 120 Findlay, OH 45839-0120 419-422-4341 R. W. Kruse, v. pres.	Lima Plant (4) Lima Plant (5) Lima Plant (6) Buckland Plant (11) Wapakoneta Plant (24) Bucyrus Plant (18) Delaware Plant (21) Findlay Plant (35) Findlay Plant (149) Marion Plant (60) Carey Plant (134) Upper Sandusky Plant (380) Upper Sandusky Plant (380) Upper Sandusky Plant (381)	Allen Allen Allen Auglaize Auglaize Crawford Delaware Hancock Hancock Marion Wyandot Wyandot Wyandot Wyandot	limestone limestone limestone limestone sand & gravel limestone limestone limestone limestone limestone limestone sand & gravel sand & gravel sand & gravel	⁴² 804,718 ⁴² 289,916 258,434 1,355,491 1,334,055 644,470 395,491 621,119 2,688,595 ⁴³ 207,907 ⁴³	820,192 292,210 242,593 1,334,653 1,337,764 527,423 275,917 600,956 2,129,773 184,308	An-2 An-3 An-11 Ae-10 Ae-30 Cd-1 Del-5 Hk-1 Hk-7 Mn-3 Wt-1 Wt-5 Wt-15 Wt-18	IM-540 IM-484 IM-541 IM-486 IM-598 IM-404 IM-207 IM-483 IM-1002 IM-168 IM-405 IM-376 IM-376 IM-551
Neer's Sand & Gravel 4859 Twp. Rd. 45 Bellefontaine, OH 43311 513-585-6733 Arden J. Neer, Sr., owner	Neer's Sand & Gravel (189)	Logan	sand & gravel	231,525	189,770	Lgn-6	IM-459
Neiheisel Sand & Gravel 912 Beeson Mill Rd. Leetonia, OH 44431 216-427-2824 Thomas L. Neiheisel, Sr., owner	Neiheisel Sand & Gravel (196)	Mahoning	sand & gravel	⁴⁰		Mg-NSG ⁴¹	IM-808
Nelson Sand & Gravel, Inc. P.O. Box 31 Kingsville, OH 44048 216-224-0198 Thomas H. Nelson, pres.	Nelson Sand & Gravel, Inc. (13) Nelson Sand & Gravel, Inc. (14)	Ashtabula Ashtabula	sand & gravel sand & gravel	7,700 10,400	6,200 10,400	Asa-11 Asa-12	IM-160 IM-911
Newark Asphalt Co. 2699 State Rte. 37 Alexandria, OH 43001 614-366-2302 Frank B. Murphy, pres.	Alexandria Pit (173)	Licking	sand & gravel	57,338	68,290	Lg-8	IM-271

³⁹No report filed in 1989.⁴⁰No sales or production.⁴¹No mine number has been assigned by the Division of Mines.⁴²All sales and production are reported under An-3.⁴³All sales and production are reported under Wt-15.

1989 OHIO ALPHABETICAL DIRECTORY OF INDUSTRIAL-MINERAL MINE OPERATORS—Continued

Name, address, telephone number, and president/owner/manager of company	Name of mine (and map location number)	County	Commodity	1989 sales (tons)	1989 production (tons)	State mine number	Division of Reclamation permit number
New Carlisle Sand & Gravel Co. 6090 S. Scarff Rd. New Carlisle, OH 45344 513-845-0696 Elizabeth Upton, owner	New Carlisle Sand & Gravel Co. (217)	Miami	sand & gravel	441	441	Mi-501	
New Miami Sand & Gravel, Inc. 151 Seven Mile Ave. New Miami, OH 45011 513-863-7676 William C. Schmidter, pres.	New Miami Sand & Gravel, Inc. (42)	Butler	sand & gravel	4,189	0	Br-3	IM-719
Newton Asphalt P.O. Box 86 Strasburg, OH 44680 216-878-5648 G. A. Gessner & C. T. Newton, partners	516 (428)	Tuscarawas	sand & gravel	53,635	52,690	Ts-2001	IM-1004
Northern Ohio Materials, Inc. 8300 State Rte. 14 Streetsboro, OH 44241 216-626-5577 Roger Schuck, operations mgr.	Northern Ohio Materials, Inc. (273)	Portage	sand & gravel	212,768	212,768	Pe-85	IM-700
Northern Ohio Paving Co. 1750 Highland Rd. Twinsburg, OH 44087 216-425-7861 Walter H. Edwards, pres.	Northern Ohio Paving Co. (316)	Stark	sand & gravel	⁴⁴		Sk-N ⁴⁵	IM-156
Northmont Sand & Gravel Co. P.O. Box 185 Englewood, OH 45322 513-836-1998 Robert D. Eyre, pres.	Northmont Sand & Gravel Co. (235)	Montgomery	sand & gravel	88,578	72,938	My-49	IM-370
North Ridge Materials 3052 E. Center St. P.O. Box 599 North Kingsville, OH 44068 216-224-1009 Joseph E. Simak, pres.	North Ridge Materials (413)	Ashtabula	sand & gravel	38,776	38,776	Asa-18	IM-949
North Shore Stone Quarries, Inc. 72 Fernhill Ave. Columbus, OH 43228 614-878-3628 Clifford Hammond, pres.	North Shore Stone Quarries, Inc. (109)	Seneca	limestone	8,355	8,355	Sa-8	IM-313
Northwood Stone & Asphalt Co. 1558 County Rd. 105 Belle Center, OH 43310 513-464-3833 Don E. Mill, pres.	Northwood Stone & Asphalt Co. (51)	Logan	limestone	181,210	175,836	Lgn-2	IM-494
Nutter Bros. Coal Co., Inc. P.O. Box 248 New Straitsville, OH 43766 614-394-2681 James P. Nutter, pres.	Nutter Bros. Coal Co., Inc. (47) Nutter Bros. Coal Co., Inc. (83)	Perry Perry	clay clay	30,411 13,167	30,411 13,167	Py-259 Py-336	IM-80, D-0288 IM-1040
Carl E. Oeder & Sons Sand & Gravel 3890 Turtlecreek Rd. Lebanon, OH 45036 513-494-1238 Carl E. Oeder, pres.	Carl E. Oeder & Sons Sand & Gravel (352) Carl E. Oeder & Sons Mine #2 (431)	Warren Warren	sand & gravel sand & gravel	325,012 21,471	325,012 21,471	Wan-41 ⁴⁶ Wan-52	IM-629 IM-994
Ohio Asphaltic Limestone Corp. 8591 Mad River Rd. Hillsboro, OH 45133 513-364-2191 W. C. Mason, pres.	Ohio Asphaltic Limestone Corp. (42)	Highland	limestone	212,570	205,000	Hd-3	IM-253
Olen Corp. 4755 S. High St. Columbus, OH 43207-4028 614-491-1515 Toby McKee, pres., 1989 (Wayne Rayburn, pres., 1990)	Olen Corp. (102) Olen Corp. (161)	Franklin Knox	sand & gravel sand & gravel	579,200 161,597	598,111 161,597	Fn-43 Kx-16	IM-188 IM-793

⁴⁴No report filed in 1989.⁴⁵No mine number has been assigned by the Division of Mines.⁴⁶See also Dravo Basic Materials Co., Inc.

1989 OHIO ALPHABETICAL DIRECTORY OF INDUSTRIAL-MINERAL MINE OPERATORS—Continued

Name, address, telephone number, and president/owner/manager of company	Name of mine (and map location number)	County	Commodity	1989 sales (tons)	1989 production (tons)	State mine number	Division of Reclamation permit number
Oneida Sand & Gravel, Inc. 8000 Blade Rd. NW Malvern, OH 44644 216-343-6831 Louis H. Smitley, pres.	Oneida Sand & Gravel, Inc. (47)	Carroll	sand & gravel	93,736	66,050	Cl-204	IM-554
Osborne Materials Co. Williams St. P.O. Box 248 Grand River, OH 44045-0248 216-357-5562 Harold T. Larned, pres.	Osborne Materials Co. (2)	Lake Erie	sand & gravel (dredged)	121,177	121,177	Lke-D ⁴⁷	
Oster Sand & Gravel, Inc. 5947 Whipple Ave. NW North Canton, OH 44720 216-494-5472 Marlene K. Oster, pres.	Oster Sand & Gravel, Inc. (326) Oster Sand & Gravel, Inc. (342)	Stark Tuscarawas	sand & gravel sand & gravel	380,010 166,344	380,010 166,344	Sk-165 Ts-1852	IM-192, IM-781 IM-75
Owens Stone Co., Inc. 1274 Ostrander Rd. Ostrander, OH 43061 614-666-7555 Kenneth F. Manning, pres.	Owens Stone Co., Inc. (22)	Delaware	limestone	258,412	284,697	Del-3	IM-327
Partin Sand & Gravel 4252 Taylorsville Rd. Dayton, OH 45424 513-233-9501 Arthur C. Partin, owner	Partin Sand & Gravel (236)	Montgomery	sand & gravel	4,580	4,580	My-55	IM-571
R. H. Penick Co. 1504 Blue Jay Rd. Heath, OH 43056 614-323-3040 R. H. Penick, owner	R. H. Penick Co. (3)	Licking	salt	11,142	11,142	Lg-45	
Penry Stone Co. P.O. Box 176 Radnor, OH 43066 614-595-3473 Walter P. Penry, pres.	Penry Stone Co. (23) Penry Stone Co. (198)	Delaware Marion	limestone sand & gravel	302,318 79,390	302,318 79,390	Del-2 Mn-4	IM-299 IM-290
Phillips Sand & Gravel U.S. Rte. 35 Box 187 Alpha, OH 45301 513-426-5461 George E. Phillips, pres.	Phillips Sand & Gravel (115)	Greene	sand & gravel	523,285	523,285	Ge-36	IM-305
Pifer Stone Co. P.O. Box 101 Williamstown, OH 45897 419-365-5078 William E. Pifer, owner	Pifer Stone Co. (36)	Hancock	limestone	408	0	Hk-4	IM-489
Piqua Materials, Inc. Piqua Minerals Division 1750 W. Statler Rd. Piqua, OH 45356 513-773-4824 Albert R. Donovan, mgr.	Piqua Minerals (64)	Miami	limestone	316,173	260,478	Mi-1	IM-382
C. F. Poeppelman, Inc. 4755 N. State Rte. 721 Bradford, OH 45308 513-448-2191 James Poeppelman, pres.	C. F. Poeppelman, Inc. (67)	Miami	limestone	167,332	167,332	Mi-10	IM-335
Portage Lakes Sand & Gravel Co. 2800 N. Turkeyfoot Rd. Akron, OH 44319 216-644-2285 James V. Crano, pres.	Portage Lakes Sand & Gravel Co. (384)	Summit	sand & gravel	207,924	208,104	St-53	IM-874
Prairie Lane Gravel Co. 4401 Prairie Lane Rd. Wooster, OH 44691 216-262-6821 Ralph W. Miller, Jr., pres.	Prairie Lane Gravel Co. (372)	Wayne	sand & gravel	101,597	101,597	We-11	IM-547

⁴⁷No mine number has been assigned by the Division of Mines.

1989 OHIO ALPHABETICAL DIRECTORY OF INDUSTRIAL-MINERAL MINE OPERATORS—Continued

Name, address, telephone number, and president/owner/manager of company	Name of mine (and map location number)	County	Commodity	1989 sales (tons)	1989 production (tons)	State mine number	Division of Reclamation permit number
Precision Sand & Gravel 12205 Gypsy Lane Rd. Bowling Green, OH 43402 419-352-4681 Randolph G. Schmeltz, pres.	Precision Sand & Gravel (379)	Wyandot	sand & gravel	76,087	76,087	Wt-4	IM-520
Price Sand & Gravel Div. of Price Asphalt & Paving Co. 115 Jefferson St. Norwalk, OH 44857-1994 419-668-1059 Robert C. Price, pres.	Price Sand & Gravel (157)	Huron	sand & gravel	98,022	88,237	Hrn-1	IM-550
Purdy Sand & Gravel Co. 14220 Parrott St. Ext. P.O. Box 667 Mt. Vernon, OH 43050 614-397-0000 J. R. Purdy, pres.	Purdy Sand & Gravel Co. (163)	Knox	sand & gravel	4,543	7,529	Kx-3 ⁴⁸	IM-300
Puskarich Limestone Co. 40580 Cadiz-Piedmont Rd. Cadiz, OH 43907 614-942-4656 Anthony Puskarich, pres.	Puskarich Limestone Co. (15)	Carroll	limestone	58,509	19,648	Cl-183	IM-7
Putnam Stone Co. R.R. 1, 7053 Road M Ottawa, OH 45875-9754 419-523-6004 J. E. Shroyer, pres.	Putnam Stone Co. (98)	Putnam	limestone	190,483	210,015	Pm-2	IM-570
Quality Ready Mix, Inc. R.R. 5 Wapakoneta, OH 45895 419-738-6010 Robert E. Hirschfeld, pres.	Quality Ready Mix, Inc. (25)	Auglaize	sand & gravel	42,182	42,182	Ae-16	IM-595
Quality Stone Co. Rte. 1 Cheshire, OH 45620 614-992-6637 Jay Hall, Jr., pres.	Quality Stone Co. (148)	Vinton	limestone	9,057	14,816	Vn-190	D-0761
R & S, Inc. 7522 Wales Rd. NW North Canton, OH 44720 216-499-1024 Garry R. Ross, pres.	Copley Sand & Gravel (427)	Summit	sand & gravel	84,671	84,671	St-54	IM-934
Rack Sand, Inc. 5175 Este Ave. Cincinnati, OH 45232 513-242-5052 Roy Schweitzer, owner	Rack Sand, Inc. (139)	Hamilton	sand & gravel	125,619	125,619	Hmn-10	IM-226
Rainbow Sand & Gravel, Inc. 9500 Elliman Rd. Mantua, OH 44255 216-562-4701 Bernard Udelson & Jeremy Samson, owners	Rainbow Sand & Gravel, Inc. (280)	Portage	sand & gravel	⁴⁹		Pe-64	IM-229
Ramsier Sand & Gravel 113 Howe St. Lodi, OH 44254 216-948-1749 Larry L. Ramsier, owner	Ramsier Sand & Gravel (205)	Medina	sand & gravel	⁴⁹		Ma-12	IM-516
Richards & Son, Inc. P.O. Box 232 Pomeroy, OH 45769 614-247-2311 Dennis R. Taylor, mgr.	Richards & Son, Inc. (212)	Meigs	sand & gravel	520,990	520,990	Ms-298	IM-32
Ridge Township Quarry R.R. 1 Box 263 Van Wert, OH 45891 419-238-2533 Jenny Lautenschlegler, foreman	Ridge Township Quarry (122)	Van Wert	limestone	118,992	118,992	Vt-7	IM-642

⁴⁸This mine was operated January and February 1989 by Purdy Sand & Gravel Co. and March through December by Sant Sand & Gravel, Inc.

⁴⁹No sales or production.

1989 OHIO ALPHABETICAL DIRECTORY OF INDUSTRIAL-MINERAL MINE OPERATORS—Continued

Name, address, telephone number, and president/owner/manager of company	Name of mine (and map location number)	County	Commodity	1989 sales (tons)	1989 production (tons)	State mine number	Division of Reclamation permit number
Ries Sand & Gravel 169 State Rte. 95 Jeromesville, OH 44840 419-368-7833 Robert Ries, owner	Ries Sand & Gravel (6)	Ashland	sand & gravel	12,052	12,238	Ald-9	IM-745
Riverside Sand & Gravel Co., Inc. P.O. Box 324 Tallmadge, OH 44278-0324 216-673-2021 A. H. Acken, Jr., pres.	Riverside Sand & Gravel Co., Inc. (333)	Summit	sand & gravel	46,043	46,043	St-24	IM-239
Gary Roberts Excavating 570 Derby Downs Rd. Newark, OH 43055 614-763-3206 Gary L. Roberts, owner	Gary Roberts Excavating (419)	Licking	sand & gravel	1,080	1,080	Lg-504	IM-991
L. G. Rockhold & Sons, Inc. 28541 State Rte. 739 West Mansfield, OH 43358 513-358-2224 Howard E. Rockhold, pres.	L. G. Rockhold & Sons, Inc. (119)	Union	limestone	224,622	232,543	Un-1	IM-208
Rogers Group, Inc. dba Sandusky Crushed Stone Co. P.O. Box 527 Sandusky, OH 44870 419-625-8493 Richard Rechter, pres.	Sandusky Crushed Stone Co. (25)	Erie	limestone	2,713,755	2,588,639	Ee-11	IM-263
Rubber City Sand & Gravel Co. P.O. Box 106 Uniontown, OH 44685 216-699-3311 William H. Leach, Sr., owner	Rubber City Sand & Gravel Co. (334)	Summit	sand & gravel	99,887	99,887	St-9	IM-167
Rupp Construction, Inc. 18228 Fulton Rd. Marshallville, OH 44645 216-855-2781 J. P. Radabaugh, pres.	Rupp Construction, Inc. (373)	Wayne	sand & gravel	265,764	265,764	We-7	IM-471
S & S Aggregate, Inc. P.O. Box 1585 Zanesville, OH 43702-1585 614-453-0721 Larry E. Young, v. pres.	S & S Aggregate, Inc. (101) Plant #15 (414) S & S Aggregate, Inc. (63) Twin Lakes Sand, Inc. (281) Twin Lakes Sand, Inc. (282) S & S Aggregate, Inc. (336)	Franklin Franklin Mercer Portage Portage Summit	sand & gravel sand & gravel limestone sand & gravel sand & gravel sand & gravel	300,000 105,000 26,800 125,000 50,000 ⁵⁰ 50,000	300,000 105,000 26,800 125,000 50,000	Fn-24 Fn-56 Mr-2 Pe-59 Pe-67 St-44	IM-266 IM-980 IM-430 IM-210 IM-202 IM-178
G. M. Sader Excavating & Paving, Inc. P.O. Box 306 Bowling Green, OH 43402 419-352-5113 Gregory M. Sader, pres.	G. M. Sader Excavating & Paving, Inc. (456)	Wood	sand & gravel	13,012	13,012	Wd-13	IM-998
Salt Creek Materials, Inc. 880 Spry Rd. Zanesville, OH 43701 614-872-3860 Charles O. Lighthizer, owner	Salt Creek Materials, Inc. (248) Salt Creek Materials, Inc. (144) (425)	Muskingum Muskingum	sand & gravel limestone sand & gravel	⁵⁰ 12,242 3,750	 12,091 837	Mum-216 Mum-269	IM-689 IM-1009
Samco, Inc. 10217 State Rte. 534 N Middlefield, OH 44062 216-272-5158 J. Jim Holmes, pres.	Springbrook (340)	Ashtabula, Trumbull	sand & gravel	408,409	408,409	Tl-12 ⁵¹	IM-131
Sandkuhl Tile Co. 05536 Kossuth-Amanda Rd. Spencerville, OH 45887 419-647-4131 Leslie E. Sandkuhl, pres.	Sandkuhl Tile Co. (2)	Auglaize	clay	3,716	4,517	Ae-7	
Sandman Sand & Stone, Inc. 1620 Kieswetter Rd. Holland, OH 43528 419-865-1666 Robert Parker, pres.	Dorr Pit (421) Bumpus (445)	Lucas Lucas	sand & gravel sand & gravel	203,476 56,778	203,476 56,778	Ls-S ⁵² Ls-SM ⁵²	IM-703 IM-1062

⁵⁰No sales or production.⁵¹All sales and production are from Trumbull County.⁵²No mine number has been assigned by the Division of Mines.

1989 OHIO ALPHABETICAL DIRECTORY OF INDUSTRIAL-MINERAL MINE OPERATORS—Continued

Name, address, telephone number, and president/owner/manager of company	Name of mine (and map location number)	County	Commodity	1989 sales (tons)	1989 production (tons)	State mine number	Division of Reclamation permit number
Sant Sand & Gravel, Inc. P.O. Box 750 Mt. Vernon, OH 43050 614-397-0000 Keith L. Sant, pres.	Sant Sand & Gravel, Inc. (163)	Knox	sand & gravel	112,399	98,585	Kx-3 ⁶³	IM-300
Schilling Contractors, Inc. Rte. 2 Box 326 Ironton, OH 45638 614-532-8463 Earl P. Schilling, pres.	Schilling Contractors, Inc. (305)	Scioto	sand & gravel	⁶⁴		So-78	
Schloss Paving Co. 13700 McCracken Rd. Cleveland, OH 44125 216-587-4900 Raymond E. Schloss, Sr., pres.	Schloss Paving Co. (274)	Portage	sand & gravel	69,548	67,238	Pe-60	IM-78
Schrader Sand & Gravel 293 Tile Mill Rd. Beaver, OH 45613 614-226-1902 Melvin Schrader, owner	Schrader Sand & Gravel (45)	Pike	sandstone	23,661	26,647	Pke-31	IM-835
Scioto Sand & Gravel P.O. Box 31 Marion, OH 43302 614-726-2164 Gerald E. Fleming, pres.	Scioto Sand & Gravel (197)	Marion	sand & gravel	100	100	Mn-16 ⁶⁵	IM-171
Scioto Valley Resources P.O. Box 760 Lucasville, OH 45648 513-393-4211 John B. Patton, pres.	Scioto Valley Resources Division (395)	Scioto	sand & gravel	286,795	314,186	So-100	IM-760
Seaway Sand & Stone, Inc. 2190 Whitehouse-Spencer Rd. Rte. 4 Box 289 Swanton, OH 43558 419-865-5751 Mack S. Moon, pres.	Seaway Sand & Stone, Inc. (195)	Lucas	sand & gravel	⁶⁶		Ls-13	IM-492
Seville Sand & Gravel, Inc. 8215 Seville Rd. Seville, OH 44273 216-948-1812 George Cross, pres.	Seville Sand & Gravel, Inc. (206)	Medina	sand & gravel	309,615	309,615	Ma-22	IM-425, IM-650, IM-651
R. W. Sidley, Inc. 615 W. Main St. Conneaut, OH 44030 216-298-3232 Robert C. Sidley, pres.	Kingsville (15)	Ashtabula	sand & gravel	40,100	44,000	Asa-15	IM-783
R. W. Sidley, Inc. 7123 Madison Rd. Thompson, OH 44086 216-298-3232 Robert C. Sidley, pres.	Thompson Pit (18) Painesville Pit (166)	Geauga Lake	sandstone sand & gravel	190,800 49,300	266,000 47,000	Gea-1 Lke-7	IM-163 IM-162
Sidney Sand & Gravel Co. P.O. Box 379 Sidney, OH 45365 513-492-3125 Patrick H. Milligan, pres.	Milligan & Milligan-Washington Twp. Pit (312) Rock Run Quarry (111)	Shelby Shelby	sand & gravel limestone	202,067 36,029	202,067 36,029	Shy-13 Shy-16	IM-412 IM-411
Sidwell Bros., Inc. 4620 Limestone Valley Rd. Zanesville, OH 43701 614-849-2392 Dale R. Sidwell, pres.	Stone Hill Quarry (146) Sidwell Quarry (78)	Coshocton Muskingum	limestone limestone	13,998 491,734	13,998 491,497	Cn-830 Mum-104	IM-1049 IM-277
Silchuk Gravel Co. 2470 Wall Rd. Rittman, OH 44270 216-336-8796 Junior F. Silchuk, owner	Silchuk Gravel Co. (208)	Medina	sand & gravel	⁶⁴		Ma-16	

⁶³This mine was operated January and February 1989 by Purdy Sand & Gravel Co. and March through December by Sant Sand & Gravel, Inc.

⁶⁴No sales or production.

⁶⁵This mine was operated 1st through 3rd quarters 1989 by Fleming Construction Co., Inc., and 4th quarter by Scioto Sand & Gravel.

⁶⁶No report filed in 1989.

1989 OHIO ALPHABETICAL DIRECTORY OF INDUSTRIAL-MINERAL MINE OPERATORS—Continued

Name, address, telephone number, and president/owner/manager of company	Name of mine (and map location number)	County	Commodity	1989 sales (tons)	1989 production (tons)	State mine number	Division of Reclamation permit number
Joe Simak & Sons Trucking, Inc. 3052 E. Center St. P.O. Box 599 North Kingsville, OH 44068 216-224-1992 Joseph E. Simak, pres.	Penn Line Pit (394)	Ashtabula	sand & gravel	1,445	1,445	Asa-S ⁵⁷	IM-853
Small's Sand & Gravel, Inc. P.O. Box 617 Gambier, OH 43022 614-427-4096 William Small, pres.	Small's Sand & Gravel, Inc. (165) Small's Sand & Gravel, Inc. (408)	Knox Knox	sand & gravel sand & gravel	303,263 0	157,564 145,700	Kx-15 Kx-17	IM-967 IM-968
Sober Sand & Gravel Co. 2898 Tallmadge Rd. Ravenna, OH 44266 216-325-7013 Waldo A. Sober, pres.	Sober Sand & Gravel Co. (275)	Portage	sand & gravel	500	0	Pe-18	IM-193
Soehnlén Bros. Sand & Gravel, Inc. Rte. 1 Box 88 Beach City, OH 44608 216-756-2244 Francis L. & Nicholas S. Soehnlén, partners	Soehnlén Bros. Sand & Gravel, Inc. (343)	Tuscarawas	sand & gravel	48,538	87,200	Ts-1826	IM-88
Solon Excavators Sand & Gravel, Inc. 10925 Mantua Center Rd. P.O. Box Q Mantua, OH 44255 216-274-8241 Howard Sargent, pres.	Solon Excavators Sand & Gravel, Inc. (443) Solon Excavators Sand & Gravel, Inc. (276)	Geauga Portage	sand & gravel sand & gravel	48,998 244,018	48,998 244,018	Gea-40 Pe-36	IM-977 IM-90
Soltis Sand & Gravel 19102 Nelson Ledge Rd. Garrettsville, OH 44231 216-548-5813 James W. Soltis, owner	Soltis Sand & Gravel (415) (86)	Geauga	sand & gravel clay	5,257 408	5,257 408	Gea-9	IM-132
Southern Ohio Aggregates 11641 Mosteller Rd. Cincinnati, OH 43113 513-771-0820 John C. Jurgensen, pres.	Southern Ohio Aggregates (284)	Preble	sand & gravel	⁵⁸		Pre-7	IM-306
Southern Silica, Inc. P.O. Box 22 Richmond Dale, OH 45673 614-884-4721 George W. Cannon, Jr., pres.	Southern Silica, Inc. (34)	Ross	sandstone	220,342	220,342	Rs-16	IM-172
Southwestern Portland Cement Co. Eastern Division 506 E. Xenia Rd. P.O. Box 191 Fairborn, OH 45324 513-878-8651 Clarence Comer, pres.	Southwestern Portland Cement Co. (33) Southwestern Portland Cement Co. (10) Southwestern Portland Cement Co. (34) Southwestern Portland Cement Co. (72)	Clark, Greene Greene Greene Montgomery	limestone limestone limestone limestone	753,900 146,492 ⁶⁰ 518,708	753,900 146,492 ⁶⁰ 518,708	Ge-1 ⁵⁹ Ge-8 Ge-9 My-58	IM-393 IM-364 IM-364 IM-330
Sphagnum Moss Peat Farm 9797 Thompson Rd. West Liberty, OH 43357 513-653-7337 Herman S. Thompson, owner	Sphagnum Moss Peat Farm (2)	Champaign	peat	33,310	20,790	Cpn-9	
Spring Creek Corp. 4723 Hardin-Wapak Rd. Sidney, OH 45365 513-492-9697 Nelson E. Barhorst, pres.	Pence Deposit (314) River Quarry (112) Jones Deposit (315)	Shelby Shelby Shelby	sand & gravel limestone sand & gravel	184,000 148,817 138,175	184,000 148,817 138,175	Shy-11 Shy-15 Shy-18	IM-743 IM-387 IM-388
Spring Industries, Inc. P.O. Box 507 New Philadelphia, OH 44663 216-339-3585 Glenn Straub, pres.	Newcomerstown Plant (72) Midvale Pit (344) County Line Plant (345)	Coshocton Tuscarawas Tuscarawas	sand & gravel sand & gravel sand & gravel	⁶⁰ 334,657 ⁶⁰	460,900	Cn-624 Ts-1771 Ts-1788	IM-243 IM-77 IM-73

⁵⁷No mine number has been assigned by the Division of Mines.⁶⁰No report filed in 1989.⁶⁰All sales and production are from Greene County.⁶⁰No sales or production.

1989 OHIO ALPHABETICAL DIRECTORY OF INDUSTRIAL-MINERAL MINE OPERATORS—Continued

Name, address, telephone number, and president/owner/manager of company	Name of mine (and map location number)	County	Commodity	1989 sales (tons)	1989 production (tons)	State mine number	Division of Reclamation permit number
Spring Run Farm & Gravel 11070 Township Rd. 71 Killbuck, OH 44637 216-276-2444 Gene Boughman, owner	Spring Run Farm & Gravel (416)	Holmes	sand & gravel	14,146	14,146	Hs-96	IM-997
Spring Valley Investments, Inc. 2800 N. Turkeyfoot Rd. Akron, OH 44319 216-644-2285 James V. Crano, pres.	Spring Valley Investments, Inc. (335)	Summit	sand & gravel	⁶¹		St-26	IM-803
City of Springfield 201 Eagle City Rd. Springfield, OH 45502 513-324-7628 Robin J. Trisel, water plant maintenance supervisor	City of Springfield (437)	Clark	sand & gravel	⁶¹		Ck-7	IM-449
Springfield Sand & Gravel Co. 4301 S. Charleston Pike Springfield, OH 45502 513-325-7386 Don E. Mill, pres.	Springfield Sand & Gravel Co. (58)	Clark	sand & gravel	402,880	340,449	Ck-25	IM-358
Standard Slag Co. 1200 Stambaugh Bldg. P.O. Box 1378 Youngstown, OH 44501 216-743-3151 J. A. Lewis, v. pres., finance	Adams (2) Marblehead (84) Cutlip (255) Shalersville (277) Shalersville Portable (278) Haverhill (306) Navarre (453)	Adams Ottawa Pike Portage Portage Scioto Stark	limestone limestone sand & gravel sand & gravel sand & gravel sand & gravel sand & gravel	292,897 1,242,192 203,229 906,206 ⁶¹ 360,046 ⁶¹	318,860 1,295,023 199,875 816,662 ⁶¹ 335,433	Ads-6 Oa-7 Pke-24 Pe-68 Pe-SS1 ⁶² So-79 Sk-241	IM-659 IM-440 IM-222 IM-143, IM-687 IM-660 IM-221 IM-582
Steetley Resources, Inc. Ohio Lime Co. 128 E. Main St. Woodville, OH 43469 419-849-2321 Ian McGregor, pres.	Millersville (103) Woodville (104)	Sandusky Sandusky	limestone limestone	⁶³ 849,974	734,320	Sy-4 Sy-8	IM-381 IM-282
Stewart & Reichman, Inc. Rte. 1 Box 64 Gnadenhutzen, OH 44629 614-922-0050 Donald P. Brown, pres.	Stewart & Reichman, Inc. (346)	Tuscarawas	sand & gravel	28,695	28,695	Ts-111	IM-55
Stillwater Sand & Gravel 7850 Karns Rd. P.O. Box 333 West Milton, OH 45383 513-698-3028 Ed Bohse, pres.	Stillwater Sand & Gravel (447)	Miami	sand & gravel	65,676	57,307	Mi-504	IM-1032
Stocker Sand & Gravel Co. P.O. Box 176 Gnadenhutzen, OH 44629 614-254-4635 William E. Stocker, pres.	Stocker Sand & Gravel Co. (347) Stocker Sand & Gravel Co. (348)	Tuscarawas Tuscarawas	sand & gravel sand & gravel	329,886 167,399	329,886 167,399	Ts-69 Ts-125	IM-51 IM-50
Stoneco, Inc. 1345 Ford St. P.O. Box 29A Maumee, OH 43537 419-893-8731 J. T. Kirkby, pres.	Maumee Quarry (54) Celina Quarry (62) Rocky Ridge (83) Auglaize Quarry (88) Scott Quarry (121) South Montpelier (375) North Montpelier (376) Lime City Quarry (131) Portage Quarry (132)	Lucas Mercer Ottawa Paulding Van Wert Williams Williams Wood Wood	limestone limestone limestone limestone limestone sand & gravel sand & gravel limestone limestone	532,667 292,799 147,950 282,428 158,562 186,803 ⁶¹ 436,835 153,485	666,870 295,744 203,368 327,050 211,918 157,797 ⁶¹ 357,556 161,938	Ls-2 Mr-1 Oa-14 Pg-2 Vt-3 Ws-6 Ws-9 Wd-6 Wd-11	IM-503 IM-592 IM-320 IM-481 IM-495 IM-497 IM-498 IM-480 IM-475
Stone Creek Brick Co. P.O. Box 116 Stone Creek, OH 43840 216-339-5511 A. C. Marsh, Jr., pres.	Stone Creek Clay Mine (67) Stone Creek Shale Pit (67)	Tuscarawas Tuscarawas	clay shale	60,805 7,514	60,805 7,514	Ts-1557 Ts-1558	IM-52 IM-52

⁶¹No sales or production.⁶²No mine number has been assigned by the Division of Mines.⁶³All sales and production are reported under Sy-8.

1989 OHIO ALPHABETICAL DIRECTORY OF INDUSTRIAL-MINERAL MINE OPERATORS—Continued

Name, address, telephone number, and president/owner/manager of company	Name of mine (and map location number)	County	Commodity	1989 sales (tons)	1989 production (tons)	State mine number	Division of Reclamation permit number
Suever Stone Co., Inc. State Rte. 697 P.O. Box 338 Delphos, OH 45833 419-692-0931 Carl Suever, pres.	Suever Stone Co., Inc. (7) Delphos Quarry (123)	Allen Van Wert	limestone limestone	103,475 166,385	91,500 147,128	An-4 Vt-1	IM-491 IM-500
Sugarcreek Clay & Limestone, Inc. P.O. Box 402 Sugarcreek, OH 44681 216-852-4440 Daniel O. Miller, pres.	Sugarcreek Clay & Limestone, Inc. (118) Sugarcreek Clay & Limestone, Inc. (69)	Tuscarawas	limestone clay shale	25,168 ⁶⁴ 64	17,872	Ts-1928	IM-98
Summitville Tiles, Inc. Summitville, OH 43962 216-223-1511 David Johnson, pres.	Summitville Tiles, Inc. (5)	Columbiana	shale	55,640	55,640	Ca-205	IM-74
Tarbox-McCall Stone Co. Div. of Hancock Ready Mix, Inc. 852 Western Ave. Findlay, OH 45840 419-422-1912 Kenneth R. Pfirsch, pres.	Tarbox-McCall Stone Co. (37)	Hancock	limestone	301,967	297,072	Hk-2	IM-439
Taylor Stone Co., Inc. P.O. Box 186 McDermott, OH 45652 614-259-2361 William E. McKinney, pres.	Taylor Quarry (35)	Scioto	sandstone	64		So-47	IM-251
Teague Gravel Co., Inc. 10924 Kinsman Rd. Newbury, OH 44065 216-564-5671 Donald Teague, pres.	Teague Gravel Pit (109)	Geauga	sand & gravel	61,556	61,556	Gea-35	IM-321
Three Rivers Sand & Gravel, Inc. 400 Cooper Ave. Cleves, OH 45002 513-941-5040 Richard W. Richter, pres.	Three Rivers Sand & Gravel, Inc. (141)	Hamilton	sand & gravel	2,418	0	Hmn-28 ⁶⁵	IM-353
Ticon Corp. 727 E. Ash St. Piqua, OH 45356 513-335-8311 Lloyd B. Fry, pres.	Ticon Corp. (390)	Miami	sand & gravel	750	750	Mi-T ⁶⁶	IM-696
Tipp Stone Co., Inc. P.O. Box 367 Troy, OH 45373 513-890-4051 T. L. Eidemiller, pres.	Troy (446) Meeker (238)	Miami Montgomery	sand & gravel sand & gravel	200 12,000	200 12,000	Mi-12 My-61	IM-467 IM-468
Towne Square Products 156 E. Broadway Westerville, OH 43081 614-882-6990 Suzanne Stilson Edgar, pres.	Towne Square Products (41)	Noble	shale	2,040	2,040	Ne-66	IM-664
Tri-County Limestone Co. 4664 Hardin-Marion Rd. N Kenton, OH 43326 419-675-7127 Norman Cochran, pres.	Tri-County Limestone Co. (61)	Marion	limestone	157,683	157,683	Mn-1	IM-250
Tri-State Asphalt Productions 44 Sixteenth St. Wheeling, WV 26003 304-233-1110 Glenn Straub, pres.	Tri-State Asphalt Productions (26)	Belmont	sand & gravel	519,903	691,160	Bt-74	IM-288
Trout Sand & Gravel Co. Rte. 4 Marietta, OH 45750 614-373-7471 Henry C. Trout, Jr., owner	Trout Sand & Gravel Co. (369)	Washington	sand & gravel	46,761	46,761	Wn-510	IM-25

⁶⁴No sales or production.⁶⁵This mine was operated 1st through 3rd quarters 1989 by Three Rivers Sand & Gravel, Inc., and 4th quarter by The Gravel Co.⁶⁶No mine number has been assigned by the Division of Mines.

1989 OHIO ALPHABETICAL DIRECTORY OF INDUSTRIAL-MINERAL MINE OPERATORS—Continued

Name, address, telephone number, and president/owner/manager of company	Name of mine (and map location number)	County	Commodity	1989 sales (tons)	1989 production (tons)	State mine number	Division of Reclamation permit number
U.S. Cement, Inc. P.O. Box 5250 Poland, OH 44514 216-499-9100 Lawrence Ousky, pres.	Quarry #8 (57) (34)	Mahoning	limestone shale	1,283,150 60,394	1,528,689 60,394	Mg-608	IM-4
U.S. Gypsum Co. 21880 W. State Rte. 163 Genoa, OH 43430-0158 419-855-8336 Paul F. Gnepper, supt.	U.S. Gypsum Co. (85)	Ottawa	limestone	295,347	342,011	Oa-1	IM-292
U.S. Silica Co. P.O. Box 100 Rockwood, MI 48173 313-379-9672 Richard E. Goodell, pres.	Coxey Works (42)	Tuscarawas	sandstone	34,734	34,734	Ts-1660	IM-68
Union Aggregates Co. 8328 Watkins Rd. P.O. Box 178 Ostrander, OH 43061 614-666-2013 Don Mill, pres.	Prospect Sand & Gravel Plant (200) Green Camp Gravel Plant (201) Union Limestone Plant (120)	Marion Marion Union	sand & gravel sand & gravel limestone	30,015 ⁶⁷ 648,109	30,015 653,511	Mn-10 Mn-12 Un-2	IM-196 IM-197 IM-236
Union Slag Corp. Rte. 4 Marietta, OH 45750 614-373-5436 Josephine Hune, owner	Plant #3 (370) Plant #2 (371)	Washington Washington	sand & gravel sand & gravel	34,583 45,144	36,016 33,389	Wn-43 Wn-44	IM-61 IM-63
V. I. P. Contractors, Inc. 3152 C1 Lighthouse Dr. Fairfield, OH 45014 513-874-8704 James E. Broshear, pres.	V. I. P. Contractors, Inc. (28)	Butler	sand & gravel	308,685	353,719	Br-36	IM-649
Valley Materials Co. 4947 U.S. Rte. 23 South P.O. Box 400 Piketon, OH 45661 614-289-4400 Ralph McFann, pres.	Valley Materials Co. (252)	Pike	sand & gravel	8,062	31,392	Pke-26	IM-142
Van Wey Sand & Gravel, Inc. 6824 Mt. Vernon Rd. NE Rte. 2 Newark, OH 43055 614-745-5965 Richard L. Van Wey, pres.	Van Wey Sand & Gravel, Inc. (179)	Licking	sand & gravel	262,724	369,560	Lg-10	IM-217
Wagner Quarries Co. 4203 Milan Rd. Sandusky, OH 44870 419-625-8141 Stephen C. Lochner, pres.	Wagner Quarries Co. (26) Wagner Quarries Co. (145)	Erie Erie	limestone limestone	1,656,657 10	1,680,577 10	Ee-1 Ee-31	IM-310 IM-1044
Waller Bros. Stone Co. P.O. Box 157 McDermott, OH 45652 614-259-2356 L. M. Shope, v. pres.	Inskeep Quarry (36) Crabtree Quarry (37) Miller Quarry (38)	Scioto Scioto Scioto	sandstone sandstone sandstone	12,776 2,346 ⁶⁷	12,776 2,346	So-48 So-76 So-82	IM-140 IM-141 IM-158
Walter's Gravel 11302 National Rd. SE Thornville, OH 43076 614-323-0783 Viva W. Fenice, owner	Walter's Gravel (180)	Licking	sand & gravel	⁶⁷		Lg-15	
Ward Materials, Inc. Rte. 2 385 Oak St. Leipsic, OH 45856 419-943-2450 Arnold W. Rosebrock, pres.	Ward Materials, Inc. (2)	Allen	sand & gravel	34,086	39,410	An-15	IM-721
Waterloo Coal Co., Inc. P.O. Box 626 Jackson, OH 45640 614-682-7787 Phil A. Bowman, William R. Parks, and T. L. Darlington, Jr., owners	Zoar (47) (23)	Jackson	limestone clay	116,842 5,056	116,842 5,056	Jkn-367	IM-774, D-0273, D-0286, D-0594

⁶⁷No sales or production.

1989 OHIO ALPHABETICAL DIRECTORY OF INDUSTRIAL-MINERAL MINE OPERATORS—Continued

Name, address, telephone number, and president/owner/manager of company	Name of mine (and map location number)	County	Commodity	1989 sales (tons)	1989 production (tons)	State mine number	Division of Reclamation permit number
Watson Gravel, Inc. 2728 Hamilton-Cleves Rd. P.O. Box 277 Ross, OH 45061 513-863-0070 Ronald E. Watson, pres.	Watson Pit (44) Spring Valley (441) Harrison Pit (142) Mason Pit (363)	Butler Greene Hamilton Warren	sand & gravel sand & gravel sand & gravel sand & gravel	660,112 85,912 445,199 100,955	603,412 85,912 445,199 100,955	Br-47 Ge-38 Hmn-60 Wan-10	IM-111 IM-333 IM-761 IM-465
Weber Sand & Gravel, Inc. Rte. 2 Box 3 Byran, OH 43506 419-636-7920 Thomas G. Weber, pres.	Weber Sand & Gravel, Inc. (377)	Defiance, Williams	sand & gravel	221,705	221,705	Ws-11 ⁶⁸	IM-509, IM-661
Weidle Sand & Gravel, Inc. P.O. Box 247 Germantown, OH 45327 513-855-2228 Ronald L. Weidle, Sr., pres.	Weidle Sand & Gravel, Inc. (41) Weidle Sand & Gravel, Inc. (239)	Butler Montgomery	sand & gravel sand & gravel	140,095 198,206	140,095 198,206	Br-6 My-41	IM-177 IM-360
Welch Sand & Gravel, Inc. 10217 Columbia St. Harrison, OH 45030-9751 513-353-3220 Charles H. Welch, pres.	Schlichter Pit (45) Fernald Pit (143) East Miami Pit (144)	Butler Hamilton Hamilton	sand & gravel sand & gravel sand & gravel	203,916 43,341 396,542	203,916 43,341 396,542	Br-38 Hmn-42 Hmn-48	IM-218 IM-823 IM-220
White Bros. Sand, Inc. 1845 Collingwood Blvd. P.O. Box 714 Toledo, OH 43695 419-243-2121 Ralph K. Kuhlman, pres.	White Bros. Sand, Inc. (3)	Maumee Bay, Maumee River	sand & gravel (dredged)	69,452	69,201	Ls-D ⁶⁹	
Whitewater Aggregates, Inc. 10431 Campbell Rd. Harrison, OH 45030 513-761-7800 Elster Varney, Jr., v. pres., operations	Whitewater Aggregates, Inc. (407)	Hamilton	sand & gravel	847,665	799,335	Hmn-69	IM-969
Dennis Winzeler Center St. Rte. 4 Box 4 Bryan, OH 43506 419-636-4285 Dennis & Polly Winzeler, owners	Dennis Winzeler (378)	Williams	sand & gravel	⁷⁰		Ws-14	IM-614
Wise Gravel 8535 W. Klinger Rd. Covington, OH 45318 513-473-3246 John A. Wise, owner	Wise Gravel (221)	Miami	sand & gravel	13,892	15,504	Mi-9	IM-408
Wyandot Dolomite, Inc. P.O. Box 126 Carey, OH 43316-0126 419-396-7641 Harold P. Wolfe, pres.	Wyandot Dolomite, Inc. (135)	Wyandot	limestone	977,813	1,246,696	Wt-8	IM-273
Wysong Gravel Co. 5040 Wolfe Creek Pike P.O. Box 5 Dayton, OH 45426-0005 513-962-2559 Gerald E. Wysong, pres.	Camden Plant (285) West Alexandria Plant (286)	Preble Preble	sand & gravel sand & gravel	118,981 156,553	118,981 156,553	Pre-4 Pre-6	IM-477 IM-478
Wysong Stone Co. 5897 State Rte. 503 N Lewisburg, OH 45338 513-962-2559 Gerald E. Wysong, pres.	Wysong Stone Co. (95)	Preble	limestone	70,598	70,598	Pre-5	IM-447
X L Sand & Gravel P.O. Box 157 Negley, OH 44441 216-426-9876 Robert Lansberry, pres.	X L Sand & Gravel (68)	Columbiana	sand & gravel	⁷¹		Ca-881	IM-611

⁶⁸All sales and production are from Williams County.⁶⁹No mine number has been assigned by the Division of Mines.⁷⁰No sales or production.⁷¹No report filed in 1989.

1989 OHIO ALPHABETICAL DIRECTORY OF INDUSTRIAL-MINERAL MINE OPERATORS—Continued

Name, address, telephone number, and president/owner/manager of company	Name of mine (and map location number)	County	Commodity	1989 sales (tons)	1989 production (tons)	State mine number	Division of Reclamation permit number
Xenia Sand, Gravel, & Asphalt Co. 588 Dayton-Xenia Rd. P.O. Box 10 Xenia, OH 45385 513-372-2736 David A. Thompson, owner	Xenia Sand, Gravel, & Asphalt Co. (117)	Greene	sand & gravel	36,264	20,718	Ge-10	IM-518
York Road Gravel Co. 8819 York Rd. SW Pataskala, OH 43062 614-927-1524 Jack & Jean Klima, owners	York Road Gravel Co. (181)	Licking	sand & gravel	10,568	10,568	Lg-38	IM-695
William H. Young 6961 Springfield-Xenia Rd. Yellow Springs, OH 45387 513-325-9571 William & Rita Young, partners	Kieffer Pit (385)	Clark	sand & gravel	5,231	5,231	Ck-501 ⁷²	IM-340
Young's Sand & Gravel Co. 689 State Rte. 39 W P.O. Box 117 Loudonville, OH 44842 419-994-3040 Milton, Marion, & Delmar Young, partners	Young's Sand & Gravel Co. (8) Young's Sand & Gravel Co. (412)	Ashland Ashland	sand & gravel sand & gravel	111,243 117,497	127,171 137,484	Ald-7 Ald-15	IM-392 IM-944
Zerger's Quarry 100 N. Sycamore St. Woodsfield, OH 43793 614-472-1675 Herman Zerger, owner	Zerger's Quarry (80)	Monroe, Noble	limestone	18,500	18,500	Ne-86	IM-70
Zoar Mining Co. P.O. Box 550 Zoar, OH 44697 216-874-2434 Peter C. Johnson, pres.	Zoar Mining Co. (70) (70) Zoar Mining Co. (71) (71)	Tuscarawas Tuscarawas	clay shale clay shale	5,625 418 19,630 5,239	5,625 418 19,630 5,239	Ts-538 Ts-540	IM-27 IM-28
Zollinger Sand & Gravel Co. 11899 Easton Rd. Rittman, OH 44270 216-855-2464 Carl Zollinger, pres.	Zollinger Sand & Gravel Co. (374)	Wayne	sand & gravel	320,735	260,735	We-15	IM-398

⁷²This mine was operated 1st and 2nd quarters 1989 by William H. Young and 3rd and 4th quarters by Daniel E. Demmy.

1989 PRODUCING LIMESTONE/DOLOMITE COMPANIES

Company	No. of operations	Sales (tons)	Production (tons)	Company	No. of operations	Sales (tons)	Production (tons)
American Aggregates Corp.	12	6,905,458	7,749,673	North Shore Stone Quarries, Inc.	1	8,355	8,355
Ayers Limestone Quarry, Inc.	1	85,209	63,819	Northwood Stone & Asphalt Co.	1	181,210	175,836
Belville Mining Co., Inc.	1	75,168	75,168	Ohio Asphaltic Limestone Corp.	1	212,570	205,000
Bluffton Stone Co.	1	127,063	159,287	Owens Stone Co., Inc.	1	258,412	284,697
Brown County Rock Crusher	1	2,104	2,104	Penry Stone Co.	1	302,318	302,318
Central Ohio Coal Co.	2	315,274	315,274	Pifer Stone Co.	1	408	0
Chesterhill Stone Co.	1	511,034	456,471	Piqua Materials, Inc.	1	316,173	260,478
Christman Quarry	1	80,946	80,946	C. F. Poeppelman, Inc.	1	167,332	167,332
Con-Ag, Inc.	1	248,552	251,669	Puskarich Limestone Co.	1	58,509	19,648
Connolly Construction Co., Inc.	1	742,571	742,571	Putnam Stone Co.	1	190,483	210,015
Cravat Coal Co.	1	34,514	28,273	Quality Stone Co.	1	9,057	14,816
Davon, Inc.	2	1,579,618	1,764,720	Ridge Township Quarry	1	118,992	118,992
C. E. Duff & Son, Inc.	1	298,214	298,214	L. G. Rockhold & Sons, Inc.	1	224,622	232,543
East Ohio Limestone Co.	1	140,384	142,454	Rogers Group, Inc., dba			
R. A. Eberts Co., Inc.	1	307,110	307,110	Sandusky Crushed Stone Co.	1	2,713,755	2,588,639
Erie Blacktop, Inc.	1	210,345	270,186	S & S Aggregate, Inc.	1	26,800	26,800
The France Stone Co.	6	3,515,876	4,005,445	Salt Creek Materials, Inc.	1	12,242	12,091
G & M Supply, Inc., dba				Sidney Sand & Gravel Co.	1	36,029	36,029
Clinton Stone, Inc.	1	262,618	262,618	Sidwell Bros., Inc.	2	505,732	505,495
Gotttron Bros. Co.	1	103,309	76,580	Southwestern Portland Cement Co.	2	1,272,608	1,272,608
Gregory Stone Co., Inc.	1	2,032	2,032	Spring Creek Corp.	1	148,817	148,817
J. M. Hamilton & Sons Co., Inc.	1	101,473	101,473	Standard Slag Co.	2	1,535,089	1,613,883
Hardin Quarry Co., Inc.	1	182,666	182,666	Steetley Resources, Inc., Ohio Lime Co.	2	849,974	734,320
Holmes Limestone Co.	2	246,687	246,687	Stoneco, Inc.	7	2,004,726	2,224,444
Honey Creek Stone Co.	1	199,698	209,780	Suever Stone Co., Inc.	2	269,860	238,628
Kimble Clay & Limestone Co.	1	99,989	99,989	Sugarcreek Clay & Limestone, Inc.	1	25,168	17,872
King Limestone, Inc.	2	137,200	137,200	Tarbox-McCall Stone Co., Div. of			
Kohl Industries	1	696	46,696	Hancock Ready Mix, Inc.	1	301,967	297,072
Edward Kraemer & Sons, Inc.	1	987,823	857,493	Tri-County Limestone Co.	1	157,683	157,683
Lafarge Corp.	1	316,478	316,478	U.S. Cement, Inc.	1	1,283,150	1,528,689
Latham Limestone, Inc.	1	256,707	250,742	U.S. Gypsum Co.	1	295,347	342,011
Ludlow Stone, Inc.	1	349,038	272,081	Union Aggregates Co.	1	648,109	653,511
MacRitchie Materials, Inc.	1	351,257	420,061	Wagner Quarries Co.	2	1,656,667	1,680,587
Maple Grove Stone Co.	1	119,603	119,603	Waterloo Coal Co., Inc.	1	116,842	116,842
Marshall Quarry, Inc.	1	6,527	6,527	Wyandot Dolomite, Inc.	1	977,813	1,246,696
Martin Marietta Magnesia				Wysong Stone Co.	1	70,598	70,598
Specialties, Inc.	1	1,906,824	1,906,824	Zerger's Quarry	1	18,500	18,500
Maxville Quarries, Inc.	1	198,033	198,033	TOTAL: 75 companies	118	47,694,253	48,823,737
McCarthy Stone Quarry	1	104,540	104,580				
Melvin Stone Co.	3	1,272,310	1,219,032				
Miami River Stone Co.	1	199,533	222,445				
National Lime & Stone Co.	10	8,133,855	7,318,888				

1989 OHIO DIRECTORY OF LIMESTONE/DOLOMITE MINE OPERATORS REPORTING SALES OR PRODUCTION, BY COUNTY

County	Name of operator	Name of mine or quarry	Township	Geological unit	Type and principal use	State mine number
Adams	Davon, Inc.	Plum Run Stone Division	Meigs	Peebles, Greenfield, & Tymochtee Dolomites (Silurian)	crushed stone—riprap, flux stone, stone for portland cement concrete, stone for asphaltic concrete, road construction/resurfacing, railroad ballast, rock dust, industrial uses; aglime	Ads-1
	Standard Slag Co.	Adams	Franklin	Niagaran dolomite (Silurian)	crushed stone—stone for portland cement concrete, stone for asphaltic concrete, road construction/resurfacing	Ads-6
Allen	Bluffton Stone Co.	Bluffton Stone Co.	Richland	Tymochtee Dolomite (Silurian)	crushed stone—riprap, stone for portland cement concrete, stone for asphaltic concrete, road construction/resurfacing; dimension stone; aglime	An-1
	National Lime & Stone Co.	Lima Plant	Bath	Silurian	crushed stone—riprap, commercial building, railroad ballast, other; aglime	An-3 ¹
Athens	Suever Stone Co., Inc.	Suever Stone Co., Inc.	Spencer	Tymochtee Dolomite (Silurian)	crushed stone—stone for asphaltic concrete, road construction/resurfacing; commercial building; aglime	An-4
	R. A. Eberts Co., Inc.	Diamond Stone	Lee		crushed stone—road construction/resurfacing	As-533
Auglaize	Con-Ag, Inc.	Con-Ag, Inc.	Noble	Cedarville Dolomite (Silurian)	crushed stone—riprap, road construction/resurfacing	Ae-31
	National Lime & Stone Co.	Buckland Plant	Moulton	Silurian	crushed stone—riprap, commercial building, railroad ballast; aglime	Ae-10
Belmont	Ayers Limestone Quarry, Inc.	Ayers Limestone Quarry, Inc.	Pease	Permian	crushed stone—riprap, road construction/resurfacing	Bt-716
	Cravat Coal Co.	Dover Pit	York	Fishpot limestone (Pennsylvanian)	crushed stone—road construction/resurfacing	Bt-119
Brown	Brown County Rock Crusher	Brown County Rock Crusher	Lewis	Ordovician	crushed stone—road construction/resurfacing	Bn-1
	Puskarich Limestone Co.	Puskarich Limestone Co.	Lee	Pennsylvanian	crushed stone—road construction/resurfacing	Cl-183
Carroll	American Aggregates Corp.	Springfield #423	Springfield	Cedarville Dolomite (Silurian)	crushed stone—road construction/resurfacing	Ck-1
Clinton	Melvin Stone Co.	Melvin Stone Co.	Richland	Guelph Dolomite (Silurian)	crushed stone—riprap, stone for portland cement concrete, stone for asphaltic concrete, road construction/resurfacing, commercial building, residential/farm use; aglime	Cln-1
	Sidwell Bros., Inc.	Stone Hill Quarry	Perry	Putnam Hill limestone (Pennsylvanian)	crushed stone—road construction/resurfacing	Cn-830
Coshocton	National Lime & Stone Co.	Bucyrus Plant	Holmes	Devonian	crushed stone—riprap, flux stone, commercial building, railroad ballast, extenders, fillers; aglime	Cd-1
Crawford	American Aggregates Corp.	Fort Jefferson #424	Butler	Cedarville Dolomite (Silurian)	crushed stone—road construction/resurfacing	Dke-1
	American Aggregates Corp.	Shawnee #225	Concord	Columbus & Delaware Limestones (Devonian)	crushed stone—road construction/resurfacing	Del-4
Delaware	National Lime & Stone Co.	Delaware Plant	Scioto	Columbus & Delaware Limestones (Devonian)	crushed stone—riprap, flux stone, commercial building, railroad ballast; aglime	Del-5

Erie	Owens Stone Co., Inc. Penry Stone Co.	Owens Stone Co., Inc. Penry Stone Co.	Scioto Radnor	Columbus Limestone (Devonian)	crushed stone—road construction/resurfacing, dimension stone; aglime crushed stone—riprap, stone for portland cement concrete, road construction/resurfacing, commercial building, dimension stone	Del-3 Del-2
	Erie Blacktop, Inc.	Erie Blacktop Quarry	Margaretta		crushed stone—riprap, stone for portland cement concrete, stone for asphaltic concrete, commercial building, road construction/resurfacing	Ee-27
	Rogers Group, Inc. (dba Sandusky Crushed Stone Co.)	Sandusky Crushed Stone Co.	Groton	Columbus & Delaware Limestones (Devonian)	crushed stone—riprap, stone for portland cement concrete, stone for asphaltic concrete, commercial building, road construction/resurfacing, railroad ballast; aglime, stone sand, stone concrete blocks, stone septic tanks crushed stone—road construction/resurfacing	Ee-11 Ee-31
Fayette	Wagner Quarries Co.	Wagner Quarries Co.	Margaretta Perkins	Columbus & Delaware Limestones (Devonian) upper Columbus & Delaware Limestones (Devonian)	crushed stone—road construction/resurfacing	Ee-1
	American Aggregates Corp.	Blue Rock Limestone #622	Perry	Tymochtee Dolomite (Silurian)	crushed stone—road construction/resurfacing	Fe-2
	Melvin Stone Co.	Melvin Stone Co.	Green	Tymochtee Dolomite (Silurian)	crushed stone—riprap, stone for portland cement concrete, road construction/resurfacing, commercial building, residential/farm use; aglime	Fe-1
Franklin	American Aggregates Corp.	Columbus Limestone #221	Marion	Columbus Limestone (Devonian)	crushed stone—road construction/resurfacing	Fh-53
		Marble Cliff #224	Norwich	Columbus & Delaware Limestones (Devonian)	crushed stone—road construction/resurfacing	Fh-2
Greene	American Aggregates Corp.	Cedarville Limestone #624	Cedarville	Cedarville Dolomite (Silurian)	crushed stone—road construction/resurfacing	Ge-17
	Southwestern Portland Cement Co.	Fairborn Limestone #431	Sugar Creek	Cedarville Dolomite (Silurian)	crushed stone—road construction/resurfacing	Ge-25
		Southwestern Portland Cement Co.	Bath	upper Brassfield Limestone (Silurian)	stone for portland cement manufacture	Ge-1
Guernsey	King Limestone, Inc.	King Limestone, Inc.	Spencer		crushed stone—road construction/resurfacing	Gy-309 ²
Hancock	National Lime & Stone Co.	Findlay Plant	Liberty	Niagaran dolomite (Silurian)	crushed stone—riprap, commercial building, railroad ballast; aglime	Hk-1
		Findlay Plant	Liberty	Niagaran dolomite (Silurian)	crushed stone—riprap, commercial building, railroad ballast	Hk-7
	Pifer Stone Co. Tarbox-McCall Stone Co. (Div. of Hancock Ready Mix, Inc.)	Pifer Stone Co. Tarbox-McCall Stone Co.	Madison Liberty	Tymochtee Dolomite (Silurian) Greenfield Dolomite (Silurian)	crushed stone—unspecified crushed stone—riprap, stone for portland cement concrete, stone for asphaltic concrete, road construction/resurfacing, commercial building	Hk-4 Hk-2
Hardin	Hardin Quarry Co., Inc.	Hardin Quarry Co., Inc.	Pleasant	Tymochtee Dolomite (Silurian)	crushed stone—riprap, road construction/resurfacing, commercial building; aglime	Hdn-2
Highland	Davon, Inc.	Highland Stone Division	Hamer	Brassfield & Dayton Limestones (Silurian)	crushed stone—riprap, stone for portland cement concrete, road construction/resurfacing; aglime	Hd-2
	Marshall Quarry, Inc.	Marshall Quarry, Inc.	Marshall		crushed stone—road construction/resurfacing, unspecified	Hd-4
	Ohio Asphaltic Limestone Corp.	Ohio Asphaltic Limestone Corp.	Union		crushed stone—riprap, stone for asphaltic concrete, road construction/resurfacing; aglime	Hd-3

¹Information for An-3 includes information for An-2 and An-11.²See also Muskingum County.

1989 OHIO DIRECTORY OF LIMESTONE/DOLOMITE MINE OPERATORS REPORTING SALES OR PRODUCTION, BY COUNTY—Continued

County	Name of operator	Name of mine or quarry	Township	Geological unit	Type and principal use	State mine number
Holmes	Holmes Limestone Co.	241 Plant	Hardy	Putnam Hill limestone (Pennsylvanian)	crushed stone—road construction/resurfacing	Hs-67
Jackson	Waterloo Coal Co., Inc.	Zoar	Bloomfield, Madison	Vanport limestone (Pennsylvanian)	crushed stone—road construction/resurfacing	Jkn-367
Lawrence	Belville Mining Co., Inc.	Brady Creek	Washington		crushed stone—riprap, road construction/resurfacing	Le-403
Logan	Connolly Construction Co., Inc. C. E. Duff & Son, Inc.	East Liberty Quarry C. E. Duff & Son, Inc.	Perry Richland		crushed stone—unspecified crushed stone—riprap, stone for portland cement concrete, road construction/resurfacing, commercial building	Lgn-1 Lgn-15
	Northwood Stone & Asphalt Co.	Northwood Stone & Asphalt Co.	Richland	Tymochtee Dolomite (Silurian)	crushed stone—riprap, stone for asphaltic concrete, road construction/resurfacing	Lgn-2
Lucas	The France Stone Co.	Silica	Sylvania	Detroit River Group (Devonian)	crushed stone—commercial building, road construction/resurfacing	Ls-3
	Stoneco, Inc.	Waterville Maumee Quarry	Waterville Waynesfield	Tymochtee Dolomite (Silurian)	crushed stone—riprap, road construction/resurfacing crushed stone—riprap, stone for portland cement concrete, stone for asphaltic concrete, road construction/resurfacing, commercial building, railroad ballast, other; stone for portland cement manufacture; aglime	Ls-1 Ls-2
Mahoning	Honey Creek Stone Co. U.S. Cement, Inc.	Honey Creek Stone Co. Quarry #8	Springfield Poland	Vanport limestone (Pennsylvanian) Vanport limestone (Pennsylvanian)	crushed stone—stone for asphaltic concrete, road construction/resurfacing crushed stone—riprap, unspecified; stone for portland cement manufacture; aglime	Mg-54 Mg-608
Marion	J. M. Hamilton & Sons Co., Inc. National Lime & Stone Co. Tri-County Limestone Co.	J. M. Hamilton & Sons Co., Inc. Marion Plant Tri-County Limestone Co.	Marion Grand Prairie, Marion Grand	Columbus & Delaware Limestones (Devonian) Silurian	crushed stone—stone for asphaltic concrete, road construction/resurfacing crushed stone—riprap, commercial building, railroad ballast, aglime	Mn-2 Mn-3
Mercer	S & S Aggregate, Inc. Stoneco, Inc.	S & S Aggregate, Inc. Celina Quarry	Dublin Jefferson	Niagaran dolomite (Silurian)	crushed stone—riprap, stone for portland cement concrete, road construction/resurfacing, dog/horse runs; aglime	Mn-1
					crushed stone—unspecified crushed stone—riprap, stone for portland cement concrete, stone for asphaltic concrete, road construction/resurfacing, commercial building, railroad ballast, other; aglime	Mr-2 Mr-1
Miami	Piqua Materials, Inc.	Piqua Minerals	Springcreek	Brassfield Limestone, Dayton & Laurel Dolomites (Silurian)	crushed stone—riprap, flux stone, road construction/resurfacing, industrial fillers; aglime	Mi-1
	Gregory Stone Co., Inc. Ludlow Stone, Inc. C. F. Poeppelman, Inc.	Gregory Quarry Ludlow Stone, Inc. C. F. Poeppelman, Inc.	Union Union Newberry	Brassfield Limestone (Silurian) Cedarville Dolomite (Silurian)	dimension stone crushed stone—riprap, road construction/resurfacing; aglime crushed stone—riprap, stone for portland cement concrete, stone for asphaltic concrete, road construction/resurfacing, other; aglime	Mi-16 Mi-502 Mi-10
Monroe	Christman Quarry	Christman Quarry	Franklin		crushed stone—road construction/resurfacing, unspecified	Me-501

Montgomery	American Aggregates Corp.	Phillipsburg Limestone #421	Clay	Cedarville Dolomite (Silurian)	crushed stone—road construction/resurfacing	My-1
		Dayton Limestone #420	Madison	Cedarville Dolomite (Silurian)	crushed stone—road construction/resurfacing	My-23
		Huber Heights Limestone #432	Van Buren	Cedarville Dolomite (Silurian)	crushed stone—road construction/resurfacing	My-32
	Southwestern Portland Cement Co.	Southwestern Portland Cement Co.	Wayne	upper Brassfield Limestone (Silurian)	stone for portland cement manufacture	My-58
Morgan	Central Ohio Coal Co.	Horse Run	Manchester	Benwood limestone (Pennsylvanian)	crushed stone—road construction/resurfacing	Mon-600
Muskingum	Chesterhill Stone Co.	Plant #1	Newton	Maxville Limestone (Mississippian)	crushed stone—riprap, stone for portland cement concrete, stone for asphaltic concrete, road construction/resurfacing, commercial building, railroad ballast, other; aglime	Mum-106
	King Limestone, Inc.	King Limestone, Inc.	Rich Hill		crushed stone—road construction/resurfacing	Gy-309 ³
	Salt Creek Materials, Inc.	Salt Creek Materials, Inc.	Perry		crushed stone—road construction/resurfacing	Mum-269
	Sidwell Bros., Inc.	Sidwell Quarry	Newton	Maxville Limestone (Mississippian)	crushed stone—road construction/resurfacing; aglime	Mum-104
Noble	Central Ohio Coal Co.	Hoskinsville Stone Quarry	Brookfield	Benwood & Sewickley limestones (Pennsylvanian)	crushed stone—riprap, road construction/resurfacing	Ne-147
	King Limestone, Inc.	King Limestone, Inc.	Brookfield	Ewing limestone (Pennsylvanian)	crushed stone—road construction/resurfacing	Ne-106
	Zerger's Quarry	Zerger's Quarry	Stock		crushed stone—unspecified	Ne-86
Ottawa	Edward Kraemer & Sons, Inc.	White Rock Quarry	Allen	Guelph Dolomite (Silurian)	crushed stone—riprap, flux stone, stone for portland cement concrete, stone for asphaltic concrete, road construction/resurfacing; aglime	Oa-6
	Standard Slag Co.	Marblehead	Danbury	Columbus Limestone (Devonian)	crushed stone—riprap, stone for portland cement concrete, road construction/resurfacing	Oa-7
	Stoneco, Inc.	Rocky Ridge	Benton		crushed stone—riprap, stone for portland cement concrete, stone for asphaltic concrete, road construction/resurfacing	Oa-14
	U.S. Gypsum Co.	U.S. Gypsum Co.	Clay	Niagaran dolomite (Silurian)	crushed stone—road construction/resurfacing; other; lime (burned stone)—building, chemical and industrial	Oa-1
Paulding	The France Stone Co.	Paulding	Crane	Tenmile Creek Dolomite (Devonian)	crushed stone—riprap, road construction/resurfacing	Pg-7
	Lafarge Corp.	Paulding Quarry	Crane	Detroit River Group & Dundee Limestone (Devonian)	stone for portland cement manufacture	Pg-1
	Stoneco, Inc.	Auglaize Quarry	Auglaize	Detroit River Group & Dundee Limestone (Devonian)	crushed stone—riprap, flux stone, stone for portland cement concrete, stone for asphaltic concrete, road construction/resurfacing, commercial building, railroad ballast, other; aglime	Pg-2
Perry	Maxville Quarries, Inc.	Maxville Quarries, Inc.	Monday-Creek	Maxville Limestone (Mississippian)	crushed stone—road construction/resurfacing	Py-235
Pickaway	Melvin Stone Co.	Limestone, Inc.	Perry		crushed stone—riprap, stone for portland cement concrete, stone for asphaltic concrete, road construction/resurfacing, commercial building, railroad ballast, residential/farm use	Pky-4
Pike	Latham Limestone, Inc.	Latham Limestone, Inc.	Miffin	Greenfield Dolomite (Silurian)	crushed stone—riprap, stone for portland cement concrete, road construction/resurfacing; aglime	Pke-13

³See also Guernsey County.

1989 OHIO DIRECTORY OF LIMESTONE/DOLOMITE MINE OPERATORS REPORTING SALES OR PRODUCTION, BY COUNTY—Continued

County	Name of operator	Name of mine or quarry	Township	Geological unit	Type and principal use	State mine number
Preble	Wysong Stone Co.	Wysong Stone Co.	Twin		crushed stone—riprap, road construction/resurfacing, ice control; dimension stone	Pre-5
Putnam	Putnam Stone Co.	Putnam Stone Co.	Pleasant, Riley	Silurian	crushed stone—riprap, flux stone, stone for portland cement concrete, road construction/resurfacing	Pm-2
Sandusky	Gottron Bros. Co.	Gottron Bros. Co.	Sandusky	Niagaran dolomite (Silurian)	crushed stone—stone for portland cement concrete, stone for asphaltic concrete, road construction/resurfacing, commercial building, fill	Sy-5
	Martin Marietta Magnesia Specialties, Inc.	Woodville Quarry	Woodville	Guelph Dolomite (Silurian)	crushed stone—riprap, flux stone; lime (burned stone)—chemical and industrial, refractory	Sy-1
	Steetley Resources, Inc., Ohio Lime Co.	Woodville	Woodville	Silurian	crushed stone—flux stone, road construction/resurfacing; aglime; lime (burned stone)—chemical and industrial, other	Sy-8 ⁴
Seneca	The France Stone Co.	Bloomville	Bloom	Columbus & Delaware Limestones (Devonian)	crushed stone—riprap, road construction/resurfacing; aglime	Sa-3
		Flat Rock	Thompson	Columbus & Delaware Limestones (Devonian)	crushed stone—riprap, road construction/resurfacing; dimension stone; stone for portland cement manufacture; aglime	Sa-1
	Maple Grove Stone Co.	Maple Grove	Liberty		crushed stone—stone for portland cement concrete, stone for asphaltic concrete, road construction/resurfacing	Sa-2
Shelby	North Shore Stone Quarries, Inc.	North Shore Stone Quarries, Inc.	Thompson		crushed stone—riprap; dimension stone	Sa-8
	Miami River Stone Co.	Miami River Stone Co.	Orange	Cedarville Dolomite (Silurian)	crushed stone—riprap, stone for asphaltic concrete, road construction/resurfacing, railroad ballast	Shy-6
	Sidney Sand & Gravel Co. Spring Creek Corp.	Rock Run Quarry River Quarry	Washington Clinton		crushed stone—riprap	Shy-16 Shy-15
Stark	East Ohio Limestone Co.	East Ohio Limestone Co.	Lake	Putnam Hill limestone (Pennsylvanian)	crushed stone—road construction/resurfacing	Sk-663
	Kohl Industries	Black Hawk	Bethlehem, Pike	Putnam Hill & Vanport limestones (Pennsylvanian)	crushed stone—road construction/resurfacing	Sk-217
Tuscarawas	Kimble Clay & Limestone Co.	Kimble Clay & Limestone Co.	Dover	Vanport limestone (Pennsylvanian)	crushed stone—riprap, road construction/resurfacing	Ts-1818
	Sugarcreek Clay & Limestone, Inc.	Sugarcreek Clay & Limestone, Inc.	Sugar Creek		crushed stone—road construction/resurfacing	Ts-1928
Union	L. G. Rockhold & Sons, Inc.	L. G. Rockhold & Sons, Inc.	York		crushed stone—stone for portland cement concrete, stone for asphaltic concrete, road construction/resurfacing, commercial building; aglime	Un-1
	Union Aggregates Co.	Union Limestone Plant	Millcreek	Columbus Limestone (Devonian)	crushed stone—riprap, road construction/resurfacing; aglime	Un-2
Van Wert	Ridge Township Quarry	Ridge Township Quarry	Ridge	Tymochtee Dolomite (Silurian)	crushed stone—road construction/resurfacing, unspecified	Vt-7
	Stoneco, Inc.	Scott Quarry	Union		crushed stone—riprap, stone for portland cement concrete, stone for asphaltic concrete, road construction/resurfacing, other; aglime	Vt-3

	Suever Stone Co., Inc.	Delphos Quarry	Washington	Tymochtee Dolomite (Silurian)	
Vinton	G & M Supply, Inc. (dba Clinton Stone, Inc.) Quality Stone Co.	Sands Hill Strip Quality Stone Co.	Clinton Elk		Vt-1 crushed stone—riprap, stone for portland cement concrete, stone for asphaltic concrete, road construction/resurfacing, railroad ballast, driveway use, ice control; stone for portland cement manufacture; aglime
Warren	American Aggregates Corp.	Lytle Limestone #422	Wayne	Brassfield Limestone (Silurian)	Vn-174 crushed stone—road construction/resurfacing; aglime Vn-190 crushed stone—unspecified Wn-35 crushed stone—road construction/resurfacing
Wayne	Holmes Limestone Co.	Wayne Mines	Franklin	Putnam Hill limestone (Pennsylvanian)	Hs-79 ^s crushed stone—road construction/resurfacing
Wood	The France Stone Co. MacRitchie Materials, Inc. Stoneco, Inc.	Custar MacRitchie Materials, Inc. Lime City Quarry	Milton Perry Perrysburg	Lockport & Salina Dolomites (Silurian)	Wd-5 crushed stone—riprap, road construction/resurfacing; aglime Wd-1 crushed stone—unspecified Wd-6 crushed stone—riprap, stone for portland cement concrete, stone for asphaltic concrete, road construction/resurfacing, other; aglime
Wyandot	McCarthy Stone Quarry National Lime & Stone Co. Wyandot Dolomite, Inc.	Portage Quarry McCarthy Stone Quarry Carey Plant Wyandot Dolomite, Inc.	Portage Pitt Crawford Crawford	Greenfield & Lockport Dolomites (Silurian) Bass Islands Group (Silurian) Silurian Greenfield & Guelph Dolomites (Silurian)	Wd-11 crushed stone—riprap, stone for portland cement concrete, stone for asphaltic concrete, road construction/resurfacing, other; aglime Wt-3 crushed stone—stone for asphaltic concrete, road construction/resurfacing Wt-1 crushed stone—riprap, flux stone, commercial building, railroad ballast, extenders, fillers; aglime; lime (burned stone)—chemical and industrial Wt-8 crushed stone—riprap, flux stone, stone for portland cement concrete, stone for asphaltic concrete, road construction/resurfacing, commercial building, railroad ballast, manufacturing sand; aglime

⁴Information for Sy-8 includes information for Sy-4.
^sAll sales and production are from Wayne County.

1989 PRODUCING SAND AND GRAVEL COMPANIES

Company	No. of operations	Sales (tons)	Production (tons)	Company	No. of operations	Sales (tons)	Production (tons)
Agg Rok Materials, Div. of Wapak Sand & Gravel Co.	1	265,261	256,068	Gerken Materials, Inc.	1	114,460	114,460
William Albert Excavating, Inc.	1	22,115	22,467	Goodwin Sand & Gravel, Inc.	1	190,450	195,000
American Aggregates Corp.	18	8,145,086	8,471,172	Green Oaks Potting Products	1	50	150
American Sand & Gravel	3	207,575	207,575	Harrison Sand & Gravel Co.	1	76,431	65,550
Apache Aggregate & Paving Co.	1	88,059	39,955	Haubeil & Sons Asphalt & Materials, Inc.	1	12,771	12,771
Ashcraft Sand & Gravel	1	45,493	45,493	Haueter Sand & Gravel, Inc.	1	193,201	193,201
Atlas Towing Co.	1	15,180	15,180	Heiser Sand & Gravel	1	46,439	43,016
Aurora Sand & Gravel Co.	1	135,978	147,618	Hillsdale Sand & Gravel, Inc.	1	20,300	0
B & D Paving, Inc.	1	5,139	5,139	Hilltop Aggregate, Inc.	1	331,747	331,747
B-M Machine Co.	1	2,700	2,700	Hilltop Basic Resources, Inc.	2	1,121,105	1,043,920
Baker Sand, Inc.	2	861,376	1,089,333	Hilltop Basic Resources, Inc., dba Enon Washed Sand & Gravel Co.	1	135,515	144,396
Barrett Paving Materials, Inc.	2	323,619	421,043	Heiser Sand & Gravel	1	1,892	1,892
Beaver Creek, Inc.	1	75,005	68,171	Tom Hollinger Excavating	1	254,495	254,495
Beck Sand & Gravel, Inc.	1	328,830	328,830	Hugo Sand Co.	1	482	482
Becky Lane Trucking, Inc.	1	15,110	15,110	Humphrey Farms	1	23,220	23,220
Paul D. Beery Trucking Co.	1	6,845	1,040	Indian Creek Sand & Gravel Co.	1	615,829	615,829
Belu & Son Paving, Inc.	1	1,529	1,529	J. P. Sand & Gravel Co.	1	4,433	4,433
Benco Leasing, Inc.	1	16,828	23,381	Jarrett Sand Co.	1	201,909	189,209
Beverly Slag Co.	1	15,355	14,602	Jefferson Materials Co.	1	10,159	10,159
Big Walnut Sand & Gravel Co.	1	3,378	250	Joseph Sand & Gravel	1	23,600	16,500
Black Top Contracting, Inc.	1	20,510	20,510	Karg Sand & Gravel Co.	1	1,232	1,232
E. E. Blair Construction Co.	1	78,650	91,700	Keener Sand & Clay Co.	1	147,563	151,000
Bolin & Bartley, Inc.	1	35,462	58,300	Kinsman Sand & Gravel Co.	1	99,708	99,708
Elmer Borchardt, Inc.	1	1,000	1,000	Kipp's Gravel Co., Inc.	1	43,693	43,693
D. H. Bowman & Sons, Inc.	1	81,884	56,627	Kirby's Sand & Gravel, Inc.	2	334,388	297,165
Boyd Gravel Co.	1	116,034	97,865	L & I Trucking & Construction, Inc.	1	47,231	24,691
Briggs Sand & Gravel, Inc.	1	9,450	9,450	L. & M. Excavators, Inc.	1	11,472	26,865
Broadway Sand & Gravel, Inc.	1	105,791	105,791	Lake Hope Asphalt, Inc.	1	146,245	146,245
Broshear Contractors, Inc.	1	4,754	5,024	Lakeside Sand & Gravel Co.	1	322,321	384,376
D & L Browning Excavating, Inc.	1	520	320	Lancaster Sand & Gravel Co.	1	4,945	4,945
Karl Brugmann Sand & Gravel, Inc.	1	97,894	84,674	Lerkis Asphalt Co., Inc.	1	143	125
Oscar Brugmann Sand & Gravel, Inc.	1	393,149	460,000	Donald Martin Contracting	1	58,155	58,155
James Bunnell, Inc.	1	252,994	252,994	Martin Farms, Inc.	1	47,941	47,941
Burlington Sand & Gravel Co.	1	7,239	7,239	Mason's Sand & Gravel Co.	1	259,667	259,667
Canton Aggregate, Div. of Central Allied Enterprises, Inc.	2	514,849	485,746	Massillon Washed Gravel Co.	1	45,469	45,469
Charlestown Sand & Gravel	1	36,347	36,347	Maumee Haulers, Inc.	1	165,229	167,228
Chattin Concrete	1	6,865	9,159	Mecco, Inc.	1	122,043	108,989
Chesterhill Stone Co.	2	203,869	131,638	Mechanicsburg Sand & Gravel, Inc.	1	24,880	24,880
Chesterville Sand & Gravel Co., Inc.	1	112,032	112,032	Meigs County Commissioners	1	100,801	100,801
Cooper Sand & Gravel	1	8,270	4,618	Menuz Bros. Sand & Gravel, Inc.	1	3,538	3,538
Cox Gravel Co., Inc.	2	192,821	222,479	Mesenburg Bros., Inc.	1	658	0
Cremeans Concrete & Supply	1	1,793	1,793	Miami River Stone Co.	1	5,808	0
R. A. Cruise Sand & Gravel, Inc.	1	45,228	116,123	Mickley Gravel Co.	1	187,596	170,679
Cummins Family Contracting	1	832	832	Miller Bros. Gravel, Inc.	1	1,262	1,262
Daniel E. Demmy	1 ¹	20,394	20,394	H. M. Miller Construction Co.	1	8,259	8,259
Demmy Sand & Gravel	1	6,836	6,836	Miller Sand & Gravel Co.	1	6,687	6,687
A. J. Diana Sons, Inc.	1	10,664	0	Miller Sand Co.	1	269,933	269,933
Dingledine Trucking Service	1	27,066	31,383	Moore's Excavating Co.	1	470,000	470,000
Dravo Basic Materials Co., Inc.	7	2,591,855	2,910,454	Muskingum River Gravel Co.	4	466,341	426,901
Dry Creek Gravel Co.	3	435,800	445,300	National Lime & Stone Co.	1	231,525	189,770
C. E. Duff & Son, Inc.	3	138,419	138,419	Neer's Sand & Gravel	2	18,100	16,600
Earth & Wood Landscape Supplies, Inc.	1	250	400	Nelson Sand & Gravel, Inc.	1	57,338	68,290
M. T. Epling Co.	1	5,480	5,480	Newark Asphalt Co.	1	441	441
Erie Blacktop, Inc.	1	63,511	56,298	New Carlisle Sand & Gravel Co.	1	4,189	0
Erie Sand & Gravel Co.	1 dredger	124,659	124,659	New Miami Sand & Gravel, Inc.	1	53,635	52,690
Ernst Material Service, Inc.	1	104,714	104,714	Newton Asphalt	1	212,768	212,768
Fairfield Ready Mix	1	417,369	974,601	Northern Ohio Materials, Inc.	1	88,578	72,938
Feikert Sand & Gravel, Inc.	1	60,114	60,114	Northmont Sand & Gravel Co.	1	38,776	38,776
Fenner Sand & Gravel, Inc.	1	188,000	189,000	North Ridge Materials	2	346,483	346,483
Fleckenstein Farm Gravel Pit	1	10,579	10,579	Carl E. Oeder & Sons Sand & Gravel	2	740,797	759,708
Fleming Construction Co., Inc.	1 ²	3,233	1,832	Olen Corp.	2	93,736	66,050
Flesher Sand & Gravel, Inc.	1	4,123	4,123	Oneida Sand & Gravel, Inc.	1 dredger	121,177	121,177
Foureman's Sand & Gravel, Inc.	1	37,861	37,861	Osborne Materials Co.	2	546,354	546,354
Frye Sand & Gravel, Inc.	1	2,163	2,163	Oster Sand & Gravel, Inc.	1	4,580	4,580
John L. Garber Materials, Inc.	1	248,556	253,470	Partin Sand & Gravel	1	79,390	79,390
				Penry Stone Co.	1		

¹This mine was operated 1st and 2nd quarters 1989 by William H. Young and 3rd and 4th quarters 1989 by Daniel E. Demmy.²This mine was operated 1st through 3rd quarters 1989 by Fleming Construction Co., Inc., and 4th quarter 1989 by Scioto Sand & Gravel.

1989 PRODUCING SAND AND GRAVEL COMPANIES—Continued

Company	No. of operations	Sales (tons)	Production (tons)	Company	No. of operations	Sales (tons)	Production (tons)
Phillips Sand & Gravel	1	523,285	523,285	Spring Industries, Inc.	1	334,657	460,900
Portage Lakes Sand & Gravel Co.	1	207,924	208,104	Spring Run Farm & Gravel	1	14,146	14,146
Prairie Lane Gravel Co.	1	101,597	101,597	Springfield Sand & Gravel Co.	1	402,880	340,449
Precision Sand & Gravel	1	76,087	76,087	Standard Slag Co.	3	1,469,481	1,351,970
Price Sand & Gravel, Div. of Price Asphalt & Paving Co.	1	98,022	88,237	Stewart & Reichman, Inc.	1	28,695	28,695
Purdy Sand & Gravel Co.	1 ³	4,543	7,529	Stillwater Sand & Gravel	1	65,676	57,307
Quality Ready Mix, Inc.	1	42,182	42,182	Stocker Sand & Gravel Co.	2	497,285	497,285
R & S, Inc.	1	84,671	84,671	Stoneco, Inc.	1	186,803	157,797
Rack Sand, Inc.	1	125,619	125,619	Teague Gravel Co., Inc.	1	61,556	61,556
Richards & Son, Inc.	1	520,990	520,990	Three Rivers Sand & Gravel, Inc.	1	2,418	0
Ries Sand & Gravel	1	12,052	12,238	Ticon Corp.	1	750	750
Riverside Sand & Gravel Co., Inc.	1	46,043	46,043	Tipp Stone Co., Inc.	2	12,200	12,200
Gary Roberts Excavating	1	1,080	1,080	Tri-State Asphalt Productions	1	519,903	691,160
Rubber City Sand & Gravel Co.	1	99,887	99,887	Trout Sand & Gravel Co.	1	46,761	46,761
Rupp Construction, Inc.	1	265,764	265,764	Union Aggregates Co.	1	30,015	30,015
S & S Aggregate, Inc.	4	580,000	580,000	Union Slag Corp.	2	79,727	69,405
G. M. Sader Excavating & Paving, Inc.	1	13,012	13,012	V.I.P. Contractors, Inc.	1	308,685	353,719
Salt Creek Materials, Inc.	1	3,750	837	Valley Materials Co.	1	8,062	31,392
Samco, Inc.	1	408,409	408,409	Van Wey Sand & Gravel, Inc.	1	262,724	369,560
Sandman Sand & Stone, Inc.	2	260,254	260,254	Ward Materials, Inc.	1	34,086	39,410
Sant Sand & Gravel, Inc.	1 ³	112,399	98,585	Watson Gravel, Inc.	4	1,292,178	1,235,478
Schloss Paving Co.	1	69,548	67,238	Weber Sand & Gravel, Inc.	1	221,705	221,705
Scioto Sand & Gravel	1 ⁴	100	100	Weidle Sand & Gravel, Inc.	2	338,301	338,301
Scioto Valley Resources	1	286,795	314,186	Welch Sand & Gravel, Inc.	3	643,799	643,799
Seville Sand & Gravel, Inc.	1	309,615	309,615	White Bros. Sand, Inc.	1 dredger	69,452	69,201
R. W. Sidley, Inc.	2	89,400	91,000	Whitewater Aggregates, Inc.	1	847,665	799,335
Sidney Sand & Gravel Co.	1	202,067	202,067	Wise Gravel	1	13,892	15,504
Joe Simak & Sons Trucking, Inc.	1	1,445	1,445	Wysong Gravel Co.	2	275,534	275,534
Small's Sand & Gravel, Inc.	2	303,263	303,264	Xenia Sand, Gravel, & Asphalt Co.	1	36,264	20,718
Sober Sand & Gravel Co.	1	500	0	York Road Gravel Co.	1	10,568	10,568
Soehnen Bros. Sand & Gravel Co.	1	48,538	87,200	William H. Young	1 ⁵	5,231	5,231
Solon Excavators Sand & Gravel, Inc.	2	293,016	293,016	Young's Sand & Gravel Co.	2	228,740	264,655
Soltis Sand & Gravel	1	5,257	5,257	Zollinger Sand & Gravel Co.	1	320,735	260,735
Spring Creek Corp.	2	322,175	322,175	TOTAL: 196 companies	261	41,019,770	42,450,090

³This mine was operated January and February 1989 by Purdy Sand & Gravel Co. and March through December 1989 by Sant Sand & Gravel, Inc.

⁴This mine was operated 1st through 3rd quarters 1989 by Fleming Construction Co., Inc., and 4th quarter 1989 by Scioto Sand & Gravel.

⁵This mine was operated 1st and 2nd quarters 1989 by William H. Young and 3rd and 4th quarters 1989 by Daniel E. Demmy.

**1989 OHIO DIRECTORY OF LAKE ERIE AND MAUMEE RIVER
SAND AND GRAVEL DREDGERS**

Name of operator	Permitted dredging areas
Erie Sand & Gravel Co.	Fairport, Vermilion-Lorain Inner, Vermilion-Lorain Outer
Osborne Materials Co.	Fairport, Vermilion-Lorain Inner, Vermilion-Lorain Outer
White Bros. Sand, Inc.	Maumee River

1989 OHIO DIRECTORY OF SAND AND GRAVEL MINING OPERATORS REPORTING SALES OR PRODUCTION, BY COUNTY

County	Name of operator	Name of pit	Township	Type and principal use	State mine number
Allen	Ward Materials, Inc.	Ward Materials, Inc.	Monroe	sand—asphaltic concrete, filtration gravel—building, other	An-15
Ashland	Ries Sand & Gravel	Ries Sand & Gravel	Mohican	sand—building, asphaltic concrete, road construction/resurfacing, cattle stalls gravel—building, asphaltic concrete, road construction/resurfacing, cattle stalls	Ald-9
	Young's Sand & Gravel Co.	Young's Sand & Gravel Co.	Green	sand—building, road construction/resurfacing, other gravel—building, road construction/resurfacing, other	Ald-7
		Young's Sand & Gravel Co.	Green	sand—building, road construction/resurfacing, other gravel—building, road construction/resurfacing, other	Ald-15
Ashtabula	Frye Sand & Gravel, Inc.	Frye Sand & Gravel, Inc.	Denmark	gravel—bank run	Asa-10
	Kinsman Sand & Gravel Co.	Kinsman Sand & Gravel Co.	Wayne	sand—unspecified	Asa-17
	Nelson Sand & Gravel, Inc.	Nelson Sand & Gravel, Inc.	Kingsville	sand—road construction/resurfacing, fill	Asa-11
		Nelson Sand & Gravel, Inc.	Kingsville	gravel—building	Asa-12
	North Ridge Materials	North Ridge Materials	Kingsville	gravel—building	Asa-18
	R. W. Sidley, Inc.	Kingsville	Kingsville	gravel—building, filtration	Asa-15
		Penn Line Pit	Richmond	sand—building, portland cement concrete, asphaltic concrete, filtration, unspecified	Asa-S ¹
Athens	Joe Simak & Sons Trucking, Inc.	Black Top #1	Rome	gravel—building	As-588
	Black Top Contracting, Inc.	Lake Hope Asphalt, Inc.	York	sand—road construction/resurfacing gravel—road construction/resurfacing sand—asphaltic concrete, fill	As-1161
Auglaize	Lake Hope Asphalt, Inc.	Joseph Sand & Gravel	Union	gravel—asphaltic concrete, driveway use	Ae-23
	Joseph Sand & Gravel	Wapakoneta Plant	Union	gravel—fill	Ae-30
	National Lime & Stone Co.	Quality Ready Mix, Inc.	Pusheta	sand—unspecified	Ae-16
	Quality Ready Mix, Inc.	Tri-State Asphalt Productions	Mead	gravel—unspecified	Bt-74
Belmont	Tri-State Asphalt Productions	Fairfield #711	Fairfield	sand—portland cement concrete, asphaltic concrete gravel—building, portland cement concrete, asphaltic concrete, road construction/resurfacing, fill, ice control, base	Br-35
Butler	American Aggregates Corp.	Hamilton #710	St. Clair	sand—road construction/resurfacing	Br-5
	Broshear Contractors, Inc.	Ross Township Gravel	Ross	sand—road construction/resurfacing gravel—road construction/resurfacing gravel—road construction/resurfacing sand—pipe fill gravel—pipe fill	Br-48

Carroll	Dingledine Trucking Service	Dingledine Trucking Service	Millford	sand—building, portland cement concrete gravel—building, portland cement concrete, road construction/ resurfacing, other	Br-50
	Dravo Basic Materials Co., Inc.	Fairfield Plant Ross Plant	Fairfield Ross	sand—road construction/resurfacing	Br-14
	Fairfield Ready Mix	Fairfield Ready Mix	St. Clair	gravel—road construction/resurfacing	Br-29
	Indian Creek Sand & Gravel Co. Martin Farms, Inc.	Indian Creek Sand & Gravel Co. Martin Farms, Inc.	Ross Madison	sand—ready mix concrete	Br-53
Champaign	Mecco, Inc.	Mecco, Inc.	Lemon	gravel—ready mix concrete	Br-40
	New Miami Sand & Gravel, Inc.	New Miami Sand & Gravel, Inc.	St. Clair	gravel—building, road construction/resurfacing, oversize sand—road construction/resurfacing	Br-52
	V. I. P. Contractors, Inc.	V. I. P. Contractors, Inc.	St. Clair	gravel—filtration	Br-15
	Watson Gravel, Inc.	Watson Pit	Fairfield	sand—road construction/resurfacing	Br-3
Clark	Weidle Sand & Gravel, Inc.	Weidle Sand & Gravel, Inc.	Madison	sand—building	Br-36
	Welch Sand & Gravel, Inc.	Schlichter Pit	Fairfield	gravel—building, road construction/resurfacing	Br-3
	Oneida Sand & Gravel, Inc.	Oneida Sand & Gravel, Inc.	Brown	sand—road construction/resurfacing	Br-36
	American Aggregates Corp.	Urbana #615	Urbana	gravel—road construction/resurfacing	Br-47
Clermont	Mechanicsburg Sand & Gravel, Inc.	Mechanicsburg Sand & Gravel, Inc.	Union	sand—road construction/resurfacing	Cl-204
	Moore's Excavating Co.	Moore's Excavating Co.	Salem	gravel—road construction/resurfacing	Cpn-1
	American Aggregates Corp.	Fairborn #413	Bethel	sand—unspecified	Cpn-22
	Daniel E. Demmy	Kieffer Pit	Mad River	gravel—unspecified	Cpn-20
Columbiana	Demmy Sand & Gravel Hilltop Basic Resources, Inc. (dba Enon Washed Sand & Gravel Co.)	Demmy Sand & Gravel Enon Washed Sand & Gravel Co.	Mad River Bethel	sand—building	Ck-13
	Hilltop Basic Resources, Inc.	Fairborn Aggregate Plant	Bethel	gravel—building	Ck-501 ²
	Springfield Sand & Gravel Co.	Springfield Sand & Gravel Co.	Springfield	sand—building, portland cement concrete, asphaltic concrete, asphaltic concrete, road construction/resurfacing	Ck-502
	William H. Young	Kieffer Pit	Mad River	gravel—building	Ck-3
Columbiana	Kipp's Gravel Co., Inc.	Kipp's Gravel Co., Inc.	Stonelick	sand—building	Ge-4 ³
	Beaver Creek, Inc.	Beaver Creek, Inc.	Salem	gravel—unspecified	Ck-25
				sand—bank run gravel—base	Ck-501 ²
					Ct-7
Columbiana					Ca-855

¹No mine number has been assigned by the Division of Mines.²This mine was operated 1st and 2nd quarters 1989 by William H. Young and 3rd and 4th quarters by Daniel E. Demmy.³See also Greene County.

1989 OHIO DIRECTORY OF SAND AND GRAVEL MINING OPERATORS REPORTING SALES OR PRODUCTION, BY COUNTY—Continued

County	Name of operator	Name of pit	Township	Type and principal use	State mine number
Coshocton	William Albert Excavating, Inc.	William Albert Excavating, Inc.	Franklin	sand—building, road construction/resurfacing, filtration, foundry, reclamation gravel—building, road construction/resurfacing, filtration, foundry, reclamation	Cn-828
	Apache Aggregate & Paving Co.	Apache Aggregate & Paving Co.	Keene	sand—asphaltic concrete, road construction/resurfacing	Cn-783
	Boyd Gravel Co.	Boyd Gravel Co.	Bethlehem	sand—building, portland cement concrete, asphaltic concrete, road construction/resurfacing, filtration, fill gravel—building, portland cement concrete, asphaltic concrete, road construction/resurfacing, filtration, fill	Cn-694
Darke	Fouremen's Sand & Gravel, Inc.	Fouremen's Sand & Gravel, Inc.	Greenville	sand—unspecified gravel—unspecified	Dke-4
	Tom Hollinger Excavating	Hollinger Gravel Plant	Harrison	gravel—ballast, farm use, bridge work	Dke-10
	Hillsdale Sand & Gravel, Inc.	Hillsdale Sand & Gravel, Inc.	Farmer	gravel—building, road construction/resurfacing, other	De-2
Defiance	Elmer Borchardt, Inc.	Elmer Borchardt, Inc.	Margaretta	gravel—bank reinforcement	Ee-18
	Jarrett Sand Co.	Jarrett Sand Co.	Groton	sand—fill	Ee-29
	Keener Sand & Clay Co.	Huron Plant	Huron	sand—foundry	Ee-5
	Mesenburg Bros., Inc.	Mesenburg Bros., Inc.	Milan	sand—bank run	Ee-24
	Miller Sand Co.	Miller Sand Co.	Margaretta	sand—fill	Ee-28
Fairfield	Paul D. Beery Trucking Co.	Paul D. Beery Trucking Co.	Berne	sand—fill	Fd-14
	Lancaster Sand & Gravel Co.	Lancaster Sand & Gravel Co.	Berne	gravel—bank run sand—building, portland cement concrete, asphaltic concrete, road construction/resurfacing, filtration, precast gravel—building, portland cement concrete, asphaltic concrete, road construction/resurfacing	Fd-13
Franklin	Agg Rok Materials (Div. of Wapak Sand & Gravel Co.)	Agg Rok	Franklin	sand—building, portland cement concrete, asphaltic concrete, road construction/resurfacing	Fn-36
	American Aggregates Corp.	Lockbourne #213	Hamilton	gravel—building, portland cement concrete, asphaltic concrete, road construction/resurfacing	Fn-23
		Columbus #210	Marion	sand—road construction/resurfacing	Fn-6
	Big Walnut Sand & Gravel Co. J. P. Sand & Gravel Co.	Big Walnut Sand & Gravel Co. J. P. Sand & Gravel Co.	Madison Hamilton	gravel—road construction/resurfacing sand—road construction/resurfacing	Fn-14 Fn-52
	L. & M. Excavators, Inc.	Westerville Industrial Park	Blendon	gravel—road construction/resurfacing sand—building, unspecified	Fn-54
	Mason's Sand & Gravel Co.	Mason's Sand & Gravel Co.	Hamilton	gravel—building sand—building, portland cement concrete	Fn-11
	Olen Corp.	Olen Corp.	Brown	gravel—building, road construction/resurfacing	Fn-43
	S & S Aggregate, Inc.	S & S Aggregate, Inc.	Hamilton	gravel—building, road construction/resurfacing sand—unspecified	Fn-24
		Plant #15	Hamilton	gravel—unspecified gravel—unspecified	Fn-56
	Cremeans Concrete & Supply M. T. Epling Co.	Cremeans Concrete & Supply Georges Creek Pit	Addison Addison	sand—fill gravel—pit run	Ga-626 Ga-243
Gallia	B-M Machine Co.	B-M Machine Co.	Huntsburg	sand—building, fill	Gea-39
Geauga	Haueter Sand & Gravel, Inc.	Haueter Sand & Gravel, Inc.	Burton, Newbury	gravel—road construction/resurfacing, oversize sand—building, portland cement concrete gravel—building, road construction/resurfacing, filtration, oversize	Gea-29

Greene	Solon Excavators Sand & Gravel, Inc.	Solon Excavators Sand & Gravel, Inc.	Auburn	sand—building gravel—building	Gea-40
	Soltis Sand & Gravel	Soltis Sand & Gravel	Parkman	sand—fill	Gea-9
	Teague Gravel Co., Inc.	Teague Gravel Pit	Newbury	gravel—building, fill, driveway use sand—building, road construction/resurfacing, nursery use gravel—building, road construction/resurfacing, nursery use	Gea-35
	American Aggregates Corp.	Haines Rd. #419	Beaver Creek	sand—road construction/resurfacing	Ge-32
		Xenia #414	Beaver Creek	gravel—road construction/resurfacing	Ge-33
		Spring Valley Gravel #434	Spring Valley	gravel—road construction/resurfacing	Ge-42
	Hilltop Basic Resources, Inc.	Fairborn Aggregate Plant	Bath	sand—road construction/resurfacing gravel—road construction/resurfacing sand—building, portland cement concrete, asphaltic concrete, fill, base, precast	Ge-4*
	Donald Martin Contracting	Donald Martin Contracting	Spring Valley	gravel—pit run	Ge-40
	Phillips Sand & Gravel	Phillips Sand & Gravel	Beaver Creek	sand—unspecified	Ge-36
	Watson Gravel, Inc.	Spring Valley	Spring Valley	gravel—unspecified sand—building, portland cement concrete, fill gravel—building, portland cement concrete, road construction/resurfacing	Ge-38
Hamilton	Xenia Sand, Gravel, & Asphalt Co.	Xenia Sand, Gravel, & Asphalt Co.	Xenia	sand—building, fill gravel—building, driveway use	Ge-10
	American Aggregates Corp.	Harrison #712	Harrison	sand—road construction/resurfacing	Hmn-37
		Kilby Rd. #713	Whitewater	sand—road construction/resurfacing	Hmn-AAC ⁶
	Ashcraft Sand & Gravel Barrett Paving Materials, Inc.	Ashcraft Sand & Gravel Miamitown Plant #53	Whitewater Crosby	gravel—road construction/resurfacing gravel—unspecified sand—asphaltic concrete	Hmn-54 Hmn-44
	James Bunnell, Inc.	Round Bottom Rd. Plant	Anderson	sand—asphaltic concrete	Hmn-56
		James Bunnell, Inc.	Whitewater	sand—asphaltic concrete gravel—asphaltic concrete	Hmn-59
	Dravo Basic Materials Co., Inc.	Newtown Plant	Anderson	sand—unspecified gravel—unspecified	Hmn-11 ⁶
		Camp Dennison Plant	Symmes	sand—road construction/resurfacing	Hmn-5
		Cleves Plant	Whitewater	sand—road construction/resurfacing	Hmn-68
	Harrison Sand & Gravel Co.	Harrison Sand & Gravel Co.	Harrison	gravel—road construction/resurfacing sand—building, portland cement concrete, asphaltic concrete, road construction/resurfacing, filtration, ice control gravel—building, portland cement concrete, asphaltic concrete, road construction/resurfacing, filtration	Hmn-17
	Rack Sand, Inc.	Rack Sand, Inc.	Mill Creek	sand—unspecified	Hmn-10
	Three Rivers Sand & Gravel, Inc. Watson Gravel, Inc.	Three Rivers Sand & Gravel, Inc. Harrison Pit	Miami Whitewater	gravel—unspecified gravel—bank run sand—building, portland cement concrete, asphaltic concrete, fill gravel—building, portland cement concrete, road construction/resurfacing	Hmn-28 Hmn-60
	Welch Sand & Gravel, Inc.	East Miami Pit	Colerain	sand—building	Hmn-48
		Fernald Pit	Crosby	gravel—building	Hmn-42
	Whitewater Aggregates, Inc.	Whitewater Aggregates, Inc.	Harrison	gravel—building sand—portland cement concrete gravel—portland cement concrete	Hmn-69

*See also Clark County.

⁶No mine number has been assigned by the Division of Mines.⁹Information for Hmn-11 includes information for Hmn-70.

1989 OHIO DIRECTORY OF SAND AND GRAVEL MINING OPERATORS REPORTING SALES OR PRODUCTION, BY COUNTY—Continued

County	Name of operator	Name of pit	Township	Type and principal use	State mine number
Henry	Gerken Materials, Inc. Muskingum River Gravel Co.	Gerken Materials, Inc. Muskingum River Gravel Co.	Liberty	sand—road construction/resurfacing	Hy-5
Hocking			Green, Starr	sand—unspecified gravel—unspecified	Hg-301
Holmes	Feikert Sand & Gravel, Inc.	Feikert Sand & Gravel, Inc.	Salt Creek	sand—building, portland cement concrete	Hs-511
	Menuez Bros. Sand & Gravel, Inc.	Fair Pit	Hardy	gravel—building, portland cement concrete, road construction/resurfacing, filtration sand—building, portland cement concrete, asphaltic concrete, ice control	Hs-82
	Spring Run Farm & Gravel	Spring Run Farm & Gravel	Killbuck	gravel—portland cement concrete, road construction/resurfacing, fill sand—building, road construction/resurfacing, fill gravel—building, road construction/resurfacing, fill	Hs-96
Huron	Erie Blacktop, Inc. Price Sand & Gravel (Div. of Price Asphalt & Paving Co.)	Erie Blacktop Sand & Gravel Pit Price Sand & Gravel	Norwalk Norwalk	sand—portland cement concrete	Hrn-16 Hrn-1
	Goodwin Sand & Gravel, Inc.	Goodwin Sand & Gravel, Inc.	Clinton	sand—building, portland cement concrete, asphaltic concrete, filtration, other gravel—building	Kx-7
Knox				sand—building, asphaltic concrete, road construction/resurfacing, other	
	Mickley Gravel Co.	Mickley Gravel Co.	Union	gravel—asphaltic concrete, road construction/resurfacing, other	Kx-5
	Olen Corp.	Olen Corp.	Morris	sand—road construction/resurfacing, other	Kx-16
	Purdy Sand & Gravel Co.	Purdy Sand & Gravel Co.	Clinton	sand—building, road construction/resurfacing, ice control gravel—building, road construction/resurfacing	Kx-37
	Sant Sand & Gravel, Inc.	Sant Sand & Gravel, Inc.	Clinton	sand—building, road construction/resurfacing, other	Kx-37
	Small's Sand & Gravel, Inc.	Small's Sand & Gravel, Inc.	Harrison	sand—building, road construction/resurfacing, other	Kx-15
			Harrison	gravel—unspecified	Kx-17 ⁸
				sand	
				gravel	
Lake	R. W. Sidley, Inc.	Painesville Pit	Painesville	sand—building, portland cement concrete, asphaltic concrete gravel—building, portland cement concrete, asphaltic concrete	Lke-7
Lawrence	Becky Lane Trucking, Inc. Burlington Sand & Gravel Co.	Becky Lane Sand Burlington Sand & Gravel Co.	Perry Perry	sand—fill sand—fill	Le-430 Le-426
Licking	American Aggregates Corp.	Newark #214	Newark	sand—road construction/resurfacing	Lg-2
	Dry Creek Gravel Co.	Water Works	Newark	gravel—road construction/resurfacing	Lg-502
		Plant #3	Newton	sand—portland cement concrete, asphaltic concrete, unspecified	Lg-DC ⁹
		Plant #2	Washington	gravel—building, road construction/resurfacing, unspecified gravel—asphaltic concrete, road construction/resurfacing, unspecified	Lg-31
	Newark Asphalt Co.	Alexandria Pit	St. Albans	sand—building, portland cement concrete, asphaltic concrete, unspecified	Lg-8
	Gary Roberts Excavating	Gary Roberts Excavating	Madison	gravel—building, road construction/resurfacing, unspecified sand—asphaltic concrete gravel—asphaltic concrete sand—base, driveway use gravel—base, driveway use	Lg-504

Logan	Van Wey Sand & Gravel, Inc. York Road Gravel Co.	Van Wey Sand & Gravel, Inc. York Road Gravel Co.	Newton Etna	sand—building, road construction/resurfacing, foundry gravel—building, road construction/resurfacing sand—unspecified gravel—bank run	Lg-10 Lg-38
	Cooper Sand & Gravel	Cooper Sand & Gravel	Lake	sand—building, pipe bedding gravel—building sand—other gravel—other	Lgn-40 Lgn-38
	Cummins Family Contracting	Cummins Family Contracting	Washington	sand—filtration sand—building, portland cement concrete sand—state park beach use sand—unspecified gravel—unspecified	Lgn-36 Lgn-31 Lgn-39 Lgn-6
	C. E. Duff & Son, Inc. Duff Sand Co. C. E. Duff & Son, Inc. Neer's Sand & Gravel	C. E. Duff & Son, Inc. Duff Sand Co. C. E. Duff & Son, Inc. Neer's Sand & Gravel	Lake Washington Union		
Lorain	Belu & Son Paving, Inc.	Belu Sand Pit	Henrietta	sand—fill	Ln-12
	Maumee Haulers, Inc. Sandman Sand & Stone, Inc.	Eber Rd. Pit Bumpus Dorr Pit	Monclova Spencer Springfield	sand—building sand—building sand—building gravel—other	Ls-26 Ls-SM ⁹ Ls-S ⁹
Marion	Fleming Construction Co., Inc.	Fleming Construction Co., Inc.	Prospect	sand—filtration gravel—bank run, fill, sewer work sand—building, portland cement concrete gravel—building, portland cement concrete gravel—other sand—building gravel—other	Mn-16 ¹⁰ Mn-4 Mn-16 ¹⁰ Mn-10
	Penry Stone Co.	Penry Stone Co.	Prospect		
	Scioto Sand & Gravel Union Aggregates Co.	Scioto Sand & Gravel Prospect Sand & Gravel Plant	Prospect Prospect		
	Baker Sand, Inc.	Baker Sand, Inc.	Harrisville, Westfield	sand—building, asphaltic concrete, road construction/resurfacing facing	Ma-4
Medina	Baker Sand, Inc.	Baker Sand, Inc.	Westfield	gravel—road construction/resurfacing sand—building, asphaltic concrete, road construction/resurfacing facing, fill	Ma-20
	Seville Sand & Gravel, Inc.	Seville Sand & Gravel, Inc.	Harrisville	gravel—road construction/resurfacing sand—building, asphaltic concrete, portland cement concrete gravel—building, asphaltic concrete, road construction/resurfacing facing	Ma-22
	Dravo Basic Materials Co., Inc. Humphrey Farms Meigs County Commissioners Richards & Son, Inc.	Apple Grove Plant Vivian Humphrey Meigs County Pit Richards & Son, Inc.	Letart Olive Letart Letart	sand gravel gravel—bank run sand—road construction/resurfacing gravel—road construction/resurfacing sand—building, portland cement concrete, asphaltic concrete gravel—building, portland cement concrete, asphaltic concrete	Ms-205 ⁸ Ms-295 Ms-301 Ms-298
	American Aggregates Corp.	Troy Gravel #433	Concord	sand—road construction/resurfacing gravel—road construction/resurfacing	Mi-3
Miami	Fenner Sand & Gravel, Inc.	Piqua Gravel #430	Springcreek	sand—road construction/resurfacing gravel—road construction/resurfacing	Mi-6
	New Carlisle Sand & Gravel Co.	Tipp City Gravel #435	Monroe	gravel—road construction/resurfacing gravel—road construction/resurfacing	Mi-8
	Stillwater Sand & Gravel	Woodville Concrete Corp.	Newton	sand—unspecified gravel—unspecified	Mi-4
	Ticon Corp.	New Carlisle Sand & Gravel Co. Stillwater Sand & Gravel Ticon Corp.	Bethel Union Washington	sand—fill gravel—fill sand—asphaltic concrete, unspecified gravel—building, asphaltic concrete, unspecified sand—unspecified gravel—unspecified	Mi-501 Mi-504 Mi-T ⁹

⁸This mine was operated January and February 1989 by Purdy Sand & Gravel Co. and March through December by Sant Sand & Gravel, Inc.

⁹Production only, no sales.

¹⁰No mine number has been assigned by the Division of Mines.

¹¹This mine was operated 1st through 3rd quarters 1989 by Fleming Construction Co., Inc., and 4th quarter by Scioto Sand & Gravel.

1989 OHIO DIRECTORY OF SAND AND GRAVEL MINING OPERATORS REPORTING SALES OR PRODUCTION, BY COUNTY—Continued

County	Name of operator	Name of pit	Township	Type and principal use	State mine number
Miami (cont)	Tipp Stone Co., Inc.	Troy	Elizabeth	sand—unspecified gravel—unspecified sand—farm use	Mi-12
	Wise Gravel	Wise Gravel	Newberry	gravel—building, farm use, driveway use, fill	Mi-9
Monroe	B & D Paving, Inc.	B & D Paving, Inc.	Salem	sand—bank run gravel—bank run	Me-508
Montgomery	American Aggregates Corp.	Rip Rap Road #416	Wayne	sand—road construction/resurfacing	My-66
	Broadway Sand & Gravel, Inc.	Broadway Sand & Gravel, Inc.	City of Moraine	gravel—road construction/resurfacing sand—building	My-65
	Hilltop Basic Resources, Inc.	West Carrollton Aggregate Plant	Jefferson, Miami	gravel—building sand—building, portland cement concrete, asphaltic concrete, fill	My-19
	Miller Bros. Gravel, Inc.	Miller Bros. Gravel, Inc.	Butler	gravel—building, portland cement concrete, asphaltic concrete, fill, base	My-52
	Northmont Sand & Gravel Co.	Northmont Sand & Gravel Co.	Randolph	sand—building, portland cement concrete, masonry sand—building	My-49
Morgan	Partin Sand & Gravel Tipp Stone Co., Inc.	Partin Sand & Gravel Meeker	Wayne Butler	gravel—building gravel—pit run	My-55
	Weidle Sand & Gravel, Inc.	Weidle Sand & Gravel, Inc.	German	sand—unspecified gravel—unspecified sand—building	My-61
	Chesterhill Stone Co.	Plant #2	Windsor	gravel—building gravel—building	My-41
Morrow	Chesterhill Stone Co.	Plant #2	Windsor	sand—portland cement concrete, asphaltic concrete, road construction/resurfacing, filtration, unspecified	Mon-588
	Chesterhill Stone Co.	Plant #2	Windsor	gravel—portland cement concrete, asphaltic concrete, road construction/resurfacing, filtration, unspecified	Mon-588
Muskingum	Cox Gravel Co., Inc.	Jennings-Lacy	Cass	sand—building, road construction/resurfacing gravel—building, road construction/resurfacing, ice control, landscaping	Mw-10
	Cox Gravel Co., Inc.	Jennings-Lacy	Cass	sand—portland cement concrete, asphaltic concrete, road construction/resurfacing, filtration, ice control	Mum-799
	Cox Gravel Co., Inc.	Jennings-Lacy	Cass	gravel—portland cement concrete, asphaltic concrete, road construction/resurfacing	Mum-799
Pickaway	American Aggregates Corp.	Prospect	Cass	gravel—portland cement concrete, asphaltic concrete, road construction/resurfacing	Mum-863
	American Aggregates Corp.	Prospect	Cass	gravel—portland cement concrete, asphaltic concrete, road construction/resurfacing	Mum-863
	American Aggregates Corp.	Prospect	Cass	gravel—portland cement concrete, asphaltic concrete, road construction/resurfacing	Mum-863
Pike	Standard Slag Co.	Valley Materials Co.	Wayne	sand—unspecified gravel—unspecified	Mum-228
	Standard Slag Co.	Valley Materials Co.	Wayne	sand—unspecified gravel—unspecified	Mum-228
	Standard Slag Co.	Valley Materials Co.	Wayne	sand—unspecified gravel—unspecified	Mum-228
Portage	American Sand & Gravel	American Sand & Gravel	Perry	sand—road construction/resurfacing, unspecified gravel—road construction/resurfacing, unspecified	Mum-269
	American Sand & Gravel	American Sand & Gravel	Perry	sand—road construction/resurfacing, unspecified gravel—road construction/resurfacing, unspecified	Mum-269
	American Sand & Gravel	American Sand & Gravel	Perry	sand—road construction/resurfacing, unspecified gravel—road construction/resurfacing, unspecified	Mum-269
Pike	Chatin Concrete	Chatin Concrete	Circleville	sand—road construction/resurfacing gravel—road construction/resurfacing	Pky-1
	Chatin Concrete	Chatin Concrete	Circleville	sand—road construction/resurfacing gravel—road construction/resurfacing	Pky-1
	Chatin Concrete	Chatin Concrete	Circleville	sand—road construction/resurfacing gravel—road construction/resurfacing	Pky-1
Portage	Standard Slag Co.	Valley Materials Co.	Seal	sand—portland cement concrete	Pke-23
	Standard Slag Co.	Valley Materials Co.	Seal	gravel—building, filtration	Pke-23
	Standard Slag Co.	Valley Materials Co.	Seal	sand—building, portland cement concrete, asphaltic concrete	Pke-23
Portage	Valley Materials Co.	Valley Materials Co.	Scioto	gravel—building, portland cement concrete, asphaltic concrete, road construction/resurfacing	Pke-24
	Valley Materials Co.	Valley Materials Co.	Scioto	gravel—building, portland cement concrete, asphaltic concrete, road construction/resurfacing	Pke-24
	Valley Materials Co.	Valley Materials Co.	Scioto	sand—asphaltic concrete gravel—asphaltic concrete	Pke-26
Portage	American Sand & Gravel	American Sand & Gravel	Suffield	sand—unspecified gravel—unspecified	Pe-ASG11
	American Sand & Gravel	American Sand & Gravel	Suffield	sand—unspecified gravel—unspecified	Pe-ASG11
	American Sand & Gravel	American Sand & Gravel	Suffield	sand—unspecified gravel—unspecified	Pe-ASG11

Aurora Sand & Gravel Co.	Aurora Sand & Gravel Co.	Aurora	sand—road construction/resurfacing	Pe-84
Beck Sand & Gravel, Inc.	Beck Sand & Gravel, Inc.	Shalersville	gravel—road construction/resurfacing	Pe-50
Karl Brugmann Sand & Gravel, Inc.	Karl Brugmann Sand & Gravel, Inc.	Shalersville	gravel—unspecified	Pe-15
Oscar Brugmann Sand & Gravel, Inc.	Oscar Brugmann Sand & Gravel, Inc.	Shalersville	sand—building	Pe-9
Charlestown Sand & Gravel	Charlestown Sand & Gravel	Charlestown	gravel—building	Pe-17
R. A. Cruise Sand & Gravel, Inc.	R. A. Cruise Sand & Gravel, Inc.	Franklin, Ravenna	sand—unspecified	Pe-45
Green Oaks Potting Products Hilltop Aggregate, Inc.	Green Oaks Potting Products Hilltop Aggregate, Inc.	Franklin Suffield	gravel—unspecified road construction/resurfacing	Pe-89 Pe-56
Hugo Sand Co.	Hugo Sand Co.	Franklin	sand—building, portland cement concrete, asphaltic concrete, other	Pe-10
Jefferson Materials Co.	Howitt	Streetsboro	gravel—building, road construction/resurfacing, unspecified	Pe-63
Karg Sand & Gravel Co.	Karg Sand & Gravel Co.	Brimfield	sand—road construction/resurfacing	Pe-83
Lakeside Sand & Gravel Co.	Lakeside Sand & Gravel Co.	Shalersville	gravel—fill	Pe-40
Miller Sand & Gravel Co.	Miller Sand & Gravel Co.	Windham	gravel—driveway use	Pe-39
Northern Ohio Materials, Inc.	Northern Ohio Materials, Inc.	Streetsboro	sand—portland cement concrete	Pe-85
S & S Aggregate, Inc.	Twin Lakes Sand, Inc.	Shalersville, Streetsboro	gravel—building, fill	Pe-59
Schloss Paving Co.	Twin Lakes Sand, Inc.	Streetsboro	sand—building, fill	Pe-67
Sober Sand & Gravel Co.	Schloss Paving Co.	Mantua	gravel—unspecified	Pe-60
Solon Excavators Sand & Gravel, Inc.	Sober Sand & Gravel Co.	Rootstown	gravel—asphaltic concrete	Pe-18
Standard Slag Co.	Solon Excavators Sand & Gravel, Inc.	Shalersville	sand—fill	Pe-36
Wysong Gravel Co.	Shalersville	Shalersville	gravel—building	Pe-68
	Camden Plant	Somers	sand—portland cement concrete, asphaltic concrete, road construction/resurfacing	Pre-4
	West Alexandria Plant	Twin	sand—building, portland cement concrete, asphaltic concrete, road construction/resurfacing	Pre-6
	Bolin & Bartley Sand & Gravel	Weller	sand—building, portland cement concrete, asphaltic concrete, road construction/resurfacing, unspecified	Rd-20
	D. H. Bowman & Sons, Inc.	Jefferson	gravel—building, unspecified	Rd-4
	John L. Garber Materials, Inc.	Troy	sand—portland cement concrete, asphaltic concrete, fill, pipe bedding	Rd-14
	Haubeil & Sons Asphalt & Materials, Inc.	Springfield	road construction/resurfacing, filtration, fill	Rs-24
	Muskingum River Gravel Co.	Jefferson	sand—building	Rs-M1
			gravel—unspecified	

¹¹No mine number has been assigned by the Division of Mines.

1989 OHIO DIRECTORY OF SAND AND GRAVEL MINING OPERATORS REPORTING SALES OR PRODUCTION, BY COUNTY—Continued

County	Name of operator	Name of pit	Township	Type and principal use	State mine number
Scioto	E. E. Blair Construction Co.	E. E. Blair Construction Co.	Porter	sand—building, asphaltic concrete	So-98
	Scioto Valley Resources	Scioto Valley Resources Division	Valley	gravel—building sand—portland cement concrete, masonry sand—road construction/resurfacing, bank run	So-100
	Standard Slag Co.	Haverhill	Green	sand—portland cement concrete, asphaltic concrete, road construction/resurfacing	So-79
Shelby	Fleckenstein Farm Gravel Pit	Fleckenstein Farm Gravel Pit	McLean	gravel—fill	Shy-12
	Miami River Stone Co.	Miami River Stone Co.	Orange	gravel—road construction/resurfacing	Shy-17
	Sidney Sand & Gravel Co.	Milligan & Milligan-Washington Twp. Pit	Washington	sand—bank run	Shy-13
	Spring Creek Corp.	Pence Deposit	Washington	gravel—bank run	Shy-11
		Jones Deposit	Washington	sand—portland cement concrete, asphaltic concrete	Shy-18
Stark	American Sand & Gravel	American Sand & Gravel	Jackson	gravel—building, portland cement concrete, asphaltic concrete	Sk-203
	Canton Aggregate (Div. of Central Allied Enterprises, Inc.)	Canton Aggregate	Jackson	sand—unspecified	Sk-689
	A. J. Diana Sons, Inc.	Canton Aggregate	Plain	sand—asphaltic concrete, other	Sk-681
	Earth & Wood Landscape Supplies, Inc.	Neidert Pit	Lawrence	gravel—portland cement concrete, asphaltic concrete, other	Sk-684
	Heiser Sand & Gravel	R. O. Snee	Jackson	sand—unspecified	Sk-242
	Massillon Washed Gravel Co.	Heiser Sand & Gravel	Jackson	gravel—fill	Sk-688
		Massillon Washed Gravel Co.	Bethlehem	gravel—road construction/resurfacing	Sk-607
	Oster Sand & Gravel, Inc.	Oster Sand & Gravel, Inc.	Jackson, Perry	sand—portland cement concrete, road construction/resurfacing	Sk-165
	American Sand & Gravel	American Sand & Gravel	Green	sand—building, asphaltic concrete, ice control, fill	St-29
	Flesher Sand & Gravel, Inc.	Flesher Sand & Gravel, Inc.	Norton	gravel—building, asphaltic concrete, road construction/resurfacing	St-52
Summit	Lerkis Asphalt Co., Inc.	Minor Rd. Plant	Copley	gravel—building, road construction/resurfacing	St-39
	H. M. Miller Construction Co.	Krumroy Pit	Springfield	gravel—parking lot base	St-46
	Portage Lakes Sand & Gravel Co.	Portage Lakes Sand & Gravel Co.	Coventry	sand—fill	St-53
	R & S, Inc.	Copley Sand & Gravel	Copley	gravel—fill	St-54
	Riverside Sand & Gravel Co., Inc.	Riverside Sand & Gravel Co., Inc.	Stow	gravel—building	St-24
	Rubber City Sand & Gravel Co.	Rubber City Sand & Gravel Co.	Green	sand—building, asphaltic concrete, road construction/resurfacing	St-9
		Rubber City Sand & Gravel Co.		gravel—building, road construction/resurfacing	
		Rubber City Sand & Gravel Co.		sand—building, portland cement concrete, road construction/resurfacing, filtration	
		Rubber City Sand & Gravel Co.		gravel—building, portland cement concrete, road construction/resurfacing, filtration	
		Rubber City Sand & Gravel Co.		sand—building, portland cement concrete, asphaltic concrete, road construction/resurfacing, fill	Tl-12
Trumbull	Samco, Inc.	Springbrook	Mesopotamia	gravel—building, road construction/resurfacing	Ts-1976
Tuscarawas	Benco Leasing, Inc.	Goshen Sand & Gravel	Goshen	sand—other	Ts-2001
	Newton Asphalt	516	Dover	gravel—building, asphaltic concrete, other	

Warren	Oster Sand & Gravel, Inc.	Oster Sand & Gravel, Inc.	Lawrence	sand—building, asphaltic concrete, ice control, fill gravel—building, asphaltic concrete, road construction/resurfacing, ice control, fill	Ts-1852
	Soehnlen Bros. Sand & Gravel, Inc.	Soehnlen Bros. Sand & Gravel, Inc.	Wayne	sand—building, road construction/resurfacing	Ts-1826
	Spring Industries, Inc.	Midvale Pit	Goshen	sand—building, road construction/resurfacing	Ts-1771
	Stewart & Reichman, Inc.	Stewart & Reichman, Inc.	Warwick	sand—building, portland cement concrete, asphaltic concrete gravel—building, portland cement concrete, asphaltic concrete sand—road construction/resurfacing	Ts-111
	Stocker Sand & Gravel Co.	Stocker Sand & Gravel Co.	Clay	gravel—road construction/resurfacing	Ts-69
		Stocker Sand & Gravel Co.	Clay	sand—building, road construction/resurfacing	Ts-125
	American Aggregates Corp.	Franklin #417	Franklin	gravel—building, road construction/resurfacing	Wan-38
	D & L Browning Excavating, Inc.	Riverside Sand & Gravel	Salem	gravel—road construction/resurfacing	Wan-B ¹²
	Ernst Material Service, Inc.	Ernst Material Service, Inc.	Salem	sand—road construction/resurfacing	Wan-46
	L & I Trucking & Construction, Inc.	L & I Trucking & Construction, Inc.	Hamilton	gravel—building, road construction/resurfacing, unspecified sand—unspecified	Wan-8
Washington		L & I Trucking & Construction, Inc.	Union	gravel—unspecified	Wan-50
		Carl E. Oeder & Sons Sand & Gravel	Union	sand—unspecified	Wan-41
		Carl E. Oeder & Sons Mine #2	Union	gravel—unspecified	Wan-52
	Watson Gravel, Inc.	Mason Pit	Union	sand—unspecified	Wan-10
	Atlas Towing Co. Beverly Slag Co.	Belpre Bank Run Devola Pit	Belpre Muskingum	gravel—unspecified sand—unspecified	Wn-54 Wn-55
	Briggs Sand & Gravel, Inc.	Briggs Sand & Gravel, Inc.	Warren	gravel—unspecified	Wn-508
	Chesterhill Stone Co.	Plant #3	Adams	gravel—road construction/resurfacing	Wn-56
	Muskingum River Gravel Co.	Plant #2	Grandview	sand—unspecified	Wn-38
	Trout Sand & Gravel Co.	Trout Sand & Gravel Co.	Warren	gravel—unspecified	Wn-510
	Union Slag Corp.	Plant #3	Muskingum	gravel—building sand—road construction/resurfacing, filtration, foundry sand—road construction/resurfacing, filtration, unspecified	Wn-43
Wayne		Plant #2	Muskingum	sand—building foundry sand—road construction/resurfacing, filtration, unspecified	Wn-44
	Prairie Lane Gravel Co.	Prairie Lane Gravel Co.	Franklin	gravel—building, asphaltic concrete, road construction/resurfacing, filtration	We-11
	Rupp Construction, Inc.	Rupp Construction, Inc.	Baughman	sand—building, road construction/resurfacing	We-7
	Zollinger Sand & Gravel Co.	Zollinger Sand & Gravel Co.	Chippewa	sand—building, portland cement concrete, asphaltic concrete, asphaltic concrete gravel—road construction/resurfacing	We-15
Williams	Stoneco, Inc.	South Montpelier	Superior	sand—building, portland cement concrete, asphaltic concrete, other gravel—building, asphaltic concrete, road construction/resurfacing, other	Ws-6
	Weber Sand & Gravel, Inc.	Weber Sand & Gravel, Inc.	St. Joseph	sand—building, portland cement concrete, filtration gravel—building, fill	Ws-11
Wood	G. M. Sader Excavating & Paving, Inc.	G. M. Sader Excavating & Paving, Inc.	Plain	sand—fill	Wd-13
Wyandot	Kirby's Sand & Gravel, Inc.	Kirby's Sand & Gravel, Inc.	Eden	sand—building, road construction/resurfacing, filtration gravel—building, asphaltic concrete	Wt-17
	National Lime & Stone Co.	Upper Sandusky Plant	Eden	sand—portland cement concrete	Wt-15 ¹³
	Precision Sand & Gravel	Precision Sand & Gravel	Crane, Eden	gravel—portland cement concrete	Wt-4

¹²No mine number has been assigned by the Division of Mines.
¹³Information for Wt-15 includes information for Wt-5 and Wt-18.

1989 PRODUCING SANDSTONE/CONGLOMERATE COMPANIES

Company	No. of operations	Sales (tons)	Production (tons)
Beaver Creek, Inc.	1	79,795	79,795
Best Sand Corp.	1	598,695	688,797
Briar Hill Stone Co.	10	27,678	28,324
Central Silica Co.	2	406,554	406,554
Cleveland Quarries Co.	2	117,591	117,591
Conotton Valley Quarries Co.	1	1,278	1,278
Gwin Contracting Co.	1	23,137	23,137
Hard Rocks, Inc.	1	29,825	39,840
Kimble Clay & Limestone Co.	1	11,005	11,005
Mesenburg Bros., Inc.	1	14,227	14,227
Schrader Sand & Gravel	1	23,661	26,647
R. W. Sidley, Inc.	1	190,800	266,000
Southern Silica, Inc.	1	220,342	220,342
U.S. Silica Co.	1	34,734	34,734
Waller Bros. Stone Co.	2	15,122	15,122
TOTAL: 15 companies	27	1,794,444	1,973,393



Sawing dimension sandstone at the Briar Hill Stone Co. near Glenmont, Holmes County. Photo taken in 1990.

1989 OHIO DIRECTORY OF SANDSTONE/CONGLOMERATE MINE OPERATORS REPORTING SALES OR PRODUCTION, BY COUNTY

County	Name of operator	Name of quarry	Township	Geological unit	Type and principal use	State mine number
Carroll	Conotton Valley Quarries Co.	Conotton Valley Quarries Co.	Lee		dimension stone—finished	Cl-102
Columbiana	Beaver Creek, Inc.	Beaver Creek, Inc.	Salem		crushed or broken stone—aggregate, unspecified	Ca-855
Coshocton	Briar Hill Stone Co.	Quarry #26 Quarry #32 Quarry #24 Quarry #54 Quarry #55 Quarry #18 Quarry #3	Monroe Monroe Monroe Monroe Monroe New Castle Tiverton	Massillon (Pennsylvanian) Massillon (Pennsylvanian) Massillon (Pennsylvanian) Massillon (Pennsylvanian) Massillon (Pennsylvanian) Massillon (Pennsylvanian) Massillon (Pennsylvanian)	dimension stone—rough architectural dimension stone—rough architectural dimension stone—rough architectural dimension stone—rough architectural dimension stone—rough architectural dimension stone—rough architectural dimension stone—rough architectural	Cn-13 Cn-686 Cn-692 Cn-809 Cn-815 Cn-695 Cn-659
Erie	Cleveland Quarries Co.	Birmingham Quarry	Florence	Berea (Mississippian)	dimension stone—rubble, finished, flagging	Ee-21
Geauga	Best Sand Corp.	Best Sand Corp.	Munson	Sharon conglomerate (Pennsylvanian)	crushed or broken stone—foundry sand, glass sand, metallurgical pebble, refractory, riprap, aggregate, fire and furnace sand, polishing/grinding sand, engine sand, frac sand, trap sand, construction, filtration, filler, extender	Gea-3
	R. W. Sidley, Inc.	Thompson Pit	Thompson	Sharon conglomerate (Pennsylvanian)	crushed or broken stone—foundry sand, metallurgical pebble, refractory, aggregate, engine sand, filtration, sand-blasting dimension stone—rough architectural	Gea-1
Holmes	Briar Hill Stone Co.	Quarry #31	Knox	Massillon (Pennsylvanian)	dimension stone—rough architectural	Hs-49
Huron	Mesenburg Bros., Inc.	Mesenburg Bros., Inc.	Townsend	Berea (Mississippian)	crushed or broken stone—riprap	Hrn-8
Knox	Briar Hill Stone Co.	Quarry #6 Quarry #34	Jefferson Union	Massillon (Pennsylvanian) Massillon (Pennsylvanian)	dimension stone—rough architectural dimension stone—rough architectural	Kx-12 Kx-10
	Central Silica Co.	Millwood Sand Division	Union	Black Hand (Mississippian)	crushed or broken stone—foundry sand, glass sand, silica flour, engine sand, frac sand, other	Kx-1
Lorain	Cleveland Quarries Co.	Amherst Quarries	Amherst	Berea (Mississippian)	crushed or broken stone—aggregate, other dimension stone—refractory, rubble, grindstones, finished, flagging	Ln-3
Mahoning	Gwin Contracting Co.	Gwin Contracting Co.	Milton	Sharon sandstone (Pennsylvanian)	crushed or broken stone—fractured laminated sand rock	Mg-62
Perry	Central Silica Co.	Central Silica Co.	Hopewell	Massillon (Pennsylvanian)	crushed or broken stone—foundry sand, glass sand, silica flour, frac sand, other	Py-202
Pike	Shrader Sand & Gravel	Shrader Sand & Gravel	Jackson		crushed or broken stone—metallurgical pebble, fire and furnace sand	Pke-31
Ross	Southern Silica, Inc.	Southern Silica, Inc.	Jefferson	Sharon conglomerate (Pennsylvanian)	crushed or broken stone—foundry sand, glass sand, engine sand, fill, filtration, construction, industrial	Rs-16
Scioto	Waller Bros. Stone Co.	Inskeep Quarry Crabtree Quarry	Rush Morgan, Rush, Union	Buena Vista (Mississippian)	dimension stone—rough construction dimension stone—rough construction	So-48 So-76
Trumbull	Hard Rocks, Inc.	Hard Rocks, Inc.	Kinsman		crushed or broken stone—aggregate	Tt-13
Tuscarawas	Kimble Clay & Limestone Co. U.S. Silica Co.	Kimble Clay & Limestone Co. Coxey Works	Dover Wayne	Massillon (Pennsylvanian)	crushed or broken stone—riprap crushed or broken stone—fire and furnace sand	Ts-1818 Ts-1660

1989 PRODUCING CLAY COMPANIES

Company	No. of operations	Sales (tons)	Production (tons)
American Olean Tile Co.	1	11,747	14,136
Athens Hocking Reclamation	1	182	182
Belden Brick Co.	5	266,257	266,257
Belville Mining Co., Inc.	1	12,330	12,330
Blue Jay Enterprises	1	4,465	4,465
Bowerston Shale Co.	1	8,672	8,672
Cedar Heights Clay Co.	2	19,195	19,195
Clark Clay Co.	1	7,564	6,144
Claycraft Co.	1	6,740	6,740
Dennis Clay Co.	2	17,445	20,308
Eberhart Coal, Inc.	2	12,397	12,397
General Clay Products Corp.	2	23,499	23,499
Holmes Limestone Co.	2	40,488	40,488
Kimble Clay & Limestone Co.	1	642,673	642,673
Kohl Industries	1	1,106	14,606
L & M Mineral Co.	2	33,325	33,325
Lafarge Corp.	1	115,048	115,048
Nutter Bros. Coal Co., Inc.	2	43,578	43,578
Sandkuhl Tile Co.	1	3,716	4,517
Soltis Sand & Gravel	1	408	408
Southwestern Portland Cement Co.	1	146,492	146,492
Stone Creek Brick Co.	1	60,805	60,805
Waterloo Coal Co., Inc.	1	5,056	5,056
Zoar Mining Co.	2	25,255	25,255
TOTAL: 24 companies	36	1,508,443	1,526,576



American Sewer Pipe Co. (National Sewer Pipe Co. prior to 1900) in Barberton, Summit County. In the late 1800's this plant was the largest sewer pipe factory in the world. Date of photo unknown, but it was published in Division of Geological Survey Bulletin 26 in 1923.

1989 OHIO DIRECTORY OF CLAY-MINE OPERATORS REPORTING SALES OR PRODUCTION, BY COUNTY

County	Name of operator	Name of mine	Township	Geological unit	Principal use	State mine number
Athens	Athens Hocking Reclamation	Athens Hocking Reclamation	York	Pleistocene glacial clay	plugging material	As-594
Auglaize	Sandkuhl Tile Co.	Sandkuhl Tile Co.	Salem	Lower Kittanning (Pennsylvanian)	common clay products	Ae-7
Coshocton	General Clay Products Corp.	Drescher Pit	Crawford		common clay products	Cn-787
Geauga	Soltis Sand & Gravel	Soltis Sand & Gravel	Parkman		fill	Gea-9
Greene	Southwestern Portland Cement Co.	Southwestern Portland Cement Co.	Bath	till	cement manufacture	Ge-8
Hocking	General Clay Products Corp.	General Clay Products Corp.	Falls Gore	No. 5 fire clay (Pennsylvanian)	common clay products, vitrified products	Hg-205
Holmes	Clark Clay Co.	Clark Clay Co.	Hardy	Putnam Hill (Pennsylvanian)	common clay products	Hs-56
	Holmes Limestone Co.	241 Plant	Hardy	Brookville & Putnam Hill (Pennsylvanian)	common clay products	Hs-67
Jackson	Cedar Heights Clay Co.	Shumate/Alban	Madison	No. 5 clay (Pennsylvanian)	common clay products	Jkn-1001
	(Div. of Resco Products, Inc.)	Cedarloo/Jenkins	Madison	No. 5 clay (Pennsylvanian)	common clay products	Jkn-1007
	Waterloo Coal Co., Inc.	Zoar	Bloomfield, Madison	Kittanning (Pennsylvanian)	common clay products	Jkn-367
Lawrence	American Olean Tile Co.	Jefferys	Elizabeth	No. 5 clay (Pennsylvanian)	common clay products, unspecified	Le-440
					common clay products, refractories	Le-449
Muskingum	Belville Mining Co., Inc.	Brady Creek	Washington			
	Bowerston Shale Co.	Frazesburg	Jackson	Flint Ridge & Middle Mercer (Pennsylvanian)	vitrified products	Mum-776
	Dennis Clay Co.	Corder Mine	Newton	No. 5 clay (Pennsylvanian)	common clay products	Mum-D ¹
Paulding	Lafarge Corp.	Paulding Quarry	Crane	Detroit River & upper Dundee (Devonian)	cement manufacture	Pg-1
Perry	Dennis Clay Co.	Olson Mine	Harrison	No. 5 clay (Pennsylvanian)	common clay products	Py-296
	Nutter Bros. Coal Co., Inc.	Nutter Bros. Coal Co., Inc.	Monday Creek		common clay products	Py-259
			Monday Creek		common clay products	Py-336
Stark	Holmes Limestone Co.	Bolivar Mine	Bethlehem	Brookville (Pennsylvanian)	common clay products	Sk-235
	Kohl Industries	Black Hawk	Bethlehem, Pike	Brookville, Putnam Hill, Vanport & Lower Kittanning (Pennsylvanian)	refractories	Sk-217
Tuscarawas	Belden Brick Co.	Belden-Wallick	Franklin, Wayne	Brookville (Pennsylvanian)	common clay products	Ts-1841
		Moonaw Pit	Sugar Creek	Brookville (Pennsylvanian)	common clay products	Ts-1517
		Finzer-Belden	Sugar Creek	Brookville & Lower Kittanning (Pennsylvanian)	common clay products	Ts-1646
		Shanesville Pit	Sugar Creek	Brookville (Pennsylvanian)	common clay products	Ts-1939
		Beagle Pit	Sugar Creek	Brookville (Pennsylvanian)	common clay products	Ts-1960
	Blue Jay Enterprises	Swanger	Sandy	Lower Kittanning (Pennsylvanian)	common clay products	Ts-520
	Eberhart Coal, Inc.	Eberhart #2 Hott Strip	Lawrence	Lower Kittanning (Pennsylvanian)	glazed ware	Ts-1994
		Kimble Clay & Limestone Co.	Dover	Vanport (Pennsylvanian)	glazed ware	Ts-1998
					common clay products, refractories, construction	Ts-1818
	L & M Mineral Co.	Luikert	Mill		common clay products	Ts-1914
		Spring	Warwick		common clay products	Ts-1982
	Stone Creek Brick Co.	Stone Creek Clay Mine	Jefferson		vitrified products	Ts-1557
	Zoar Mining Co.	Zoar Mining Co.	Sandy		common clay products	Ts-538
			Sandy		common clay products	Ts-540
Wyandot	Claycraft Co.	Claycraft Plant #1 Clay Pit	Crane	alluvial clay	common clay products	Wt-7

¹No mine number has been assigned by the Division of Mines.

1989 PRODUCING SHALE COMPANIES

Company	No. of operations	Sales (tons)	Production (tons)
Belden Brick Co.	4	212,407	212,407
Blue Jay Enterprises	1	2,761	2,761
Bowerston Shale Co.	2	50,815	50,815
Claycraft Co.	1	87,400	87,400
Dome Minerals, Inc.	1	3,472	3,472
Eberhart Coal, Inc.	1	2,450	2,450
General Clay Products Corp.	4	60,375	60,375
Glen-Gery Corp.	1	225,359	225,359
Hydraulic Press Brick Co.	1	233,754	245,523
Janson Soil Service, Inc.	1	500	500
Kimble Clay & Limestone Co.	1	856,822	856,822
L & M Mineral Co.	2	52,572	52,572
London Tile Co.	1	2,596	2,596
Stone Creek Brick Co.	1	7,514	7,514
Summitville Tiles, Inc.	1	55,640	55,640
Towne Square Products	1	2,040	2,040
U.S. Cement, Inc.	1	60,394	60,394
Zoar Mining Co.	2	5,657	5,657
TOTAL: 18 companies	27	1,922,528	1,934,297



Shale pit of the Athens Brick Co. at Athens, Athens County. The material was used in the manufacture of paving block. Photo *circa* 1910.

1989 OHIO DIRECTORY OF SHALE-MINE OPERATORS REPORTING SALES OR PRODUCTION, BY COUNTY

County	Name of operator	Name of mine	Township	Geological unit	Principal use	State mine number
Ashtand	London Tile Co.	Biglow	Ruggles	Bedford (Mississippian)	common clay products	Ald-1
Ashtabula	Janson Soil Service, Inc.	Janson Soil Service, Inc.	Morgan		lightweight aggregate	Asa-14
Columbiana	Dome Minerals, Inc.	Dome Minerals, Inc.	Franklin		building bricks	Ca-947
	Summitville Tiles, Inc.	Summitville Tiles, Inc.	Franklin		common clay products	Ca-205
Coshocton	General Clay Products Corp.	Drescher Pit	Crawford	Lower Kittanning (Pennsylvanian)	common clay products	Cn-787
Cuyahoga	Hydraulic Press Brick Co.	Hydraulic Press Brick Co.	City of Independence	Chagrin (Devonian)	lightweight aggregate	Cya-19
Franklin	Claycraft Co.	Claycraft Plant #4 Shale Pit	Jefferson	Bedford (Mississippian)	common clay products	Fn-1
Harrison	Bowerston Shale Co.	Bowerston	Monroe	Conemaugh (Pennsylvanian)	vitrified products	Hn-152
Hocking	General Clay Products Corp.	General Clay Products Corp.	Falls Gore	No. 5 fire clay (Pennsylvanian)	vitrified products	Hg-205
Holmes	General Clay Products Corp.	Troyer Pit	Clark	Lower Kittanning (Pennsylvanian)	common clay products	Hs-77
Licking	Bowerston Shale Co.	Hanover	Hanover	Logan (Mississippian)	vitrified products	Lg-501
Mahoning	U.S. Cement, Inc.	Quarry #8	Poland	Vanport (Pennsylvanian)	cement manufacture	Mg-608
Marion	Glen-Gery Corp.	Glen-Gery Corp.	Tully	Bedford (Mississippian)	common clay products	Mn-7
Medina	General Clay Products Corp.	General Clay Products Corp.	Wadsworth		common clay products	Ma-6
Noble	Towne Square Products	Towne Square Products	Buffalo		common clay products	Ne-66
Tuscarawas	Belden Brick Co.	Belden Wallick	Franklin, Wayne	Brookville & Strasburg (Pennsylvanian)	common clay products	Ts-1841
		Moomaw Pit	Sugar Creek	Brookville & Tionesta (Pennsylvanian)	common clay products	Ts-1517
		Firzer-Belden	Sugar Creek	Brookville (Pennsylvanian)	common clay products	Ts-1646
		Shanesville Pit	Sugar Creek	Brookville (Pennsylvanian)	common clay products	Ts-1939
		Swanger	Sandy		common clay products	Ts-520
	Blue Jay Enterprises	Eberhart #2 Hott Strip	Lawrence	Lower Kittanning (Pennsylvanian)	common clay products	Ts-1994
	Eberhart Coal, Inc.	Kimble Clay & Limestone Co.	Dover	Vanport (Pennsylvanian)	common clay products, construction	Ts-1818
	Kimble Clay & Limestone Co.				common clay products	Ts-1884
	L & M Mineral Co.	Evans	Mill, Rush, Warwick		common clay products	Ts-1981
		Holmes	Mill, Rush		common clay products	Ts-1558
	Stone Creek Brick Co.	Stone Creek Shale Pit	Jefferson		vitrified products	Ts-538
	Zoar Mining Co.	Zoar Mining Co.	Sandy		common clay products	Ts-540
		Zoar Mining Co.	Sandy		common clay products	

**1989 OHIO DIRECTORY OF SALT-MINE AND SALT-BRINING-PLANT OPERATORS
REPORTING SALES OR PRODUCTION, BY COUNTY**

County	Name of operator	Name of mine	Township	Geological unit and product	State mine number
Cuyahoga	Akzo Salt, Inc.	Cleveland Mine	City of Cleveland	Salina (Silurian)—rock salt	Cya-30
Lake	Morton Thiokol, Inc., Morton Salt Div.	Fairport Mine	Painesville	Salina (Silurian)—rock salt	Lke-6
Licking	R. H. Penick Co.	R. H. Penick Co.	Newark	"Newburg" (Silurian)—natural brine	Lg-45
Summit	International Salt Co.	International Salt Co.	Coventry	Salina (Silurian)—artificial brine	St-9127
Wayne	Morton Thiokol, Inc., Morton Salt Div.	Morton Salt Well Field	Milton	Salina (Silurian)—artificial brine	We-9129

1989 OHIO DIRECTORY OF GYPSUM-MINE OPERATORS REPORTING SALES OR PRODUCTION

County	Name of operator	Name of mine	Township	Geological unit	State mine number
Ottawa	Celotex Corp.	American #2	Portage	Silurian	Oa-2

1989 OHIO DIRECTORY OF PEAT-MINE OPERATORS REPORTING SALES OR PRODUCTION, BY COUNTY

County	Name of operator	Name of mine	Township	Type and principal use	State mine number
Champaign	Sphagnum Moss Peat Farm	Sphagnum Moss Peat Farm	Harrison	mulch, humus—worm culture	Cpn-9
Portage	Green Oaks Potting Products	Green Oaks Potting Products	Franklin	mulch	Pe-89
Stark	Earth & Wood Landscape Supplies, Inc.	R. O. Snee	Jackson	mulch	Sk-242
Williams	Lingvai Peat Co.	Lingvai Peat Co.	Center	mulch	Ws-17

**NUMERICAL INDEX OF OPERATORS OF MINES
SHOWN ON 1989 MINERAL INDUSTRIES MAP OF OHIO, BY COMMODITY**

COAL ● ○

<i>Map location number</i>	<i>County</i>	<i>State mine number</i>	<i>Division of Reclamation permit number</i>	<i>Name of operator</i>
3	Belmont	Bt-68	D-0360	Ohio Valley Coal Co.
4	Belmont	Bt-78	IM-733	Cravat Coal Co.
13	Belmont	Bt-147	D-0022	Marietta Coal Co.
16	Belmont	Bt-643	D-0328	Saginaw Mining Co.
19	Belmont	Bt-927	D-0483	Fairpoint Coal Co.
25	Belmont	Bt-992	D-0305	Ohio River Collieries, Inc.
27	Belmont	Bt-1074	D-0340	Ohio River Collieries, Inc.
30	Belmont	Bt-1095	D-0096	R & F Coal Co.
36	Belmont	Bt-1102	D-0340	Ohio River Collieries, Inc.
38	Belmont	Bt-1104	D-0088	Marietta Coal Co.
39	Belmont	Bt-1105	D-0333	Marietta Coal Co.
42	Belmont	Bt-1109	D-0270	Marietta Coal Co.
47	Belmont	Bt-1118	D-0396	Cravat Coal Co.
51	Belmont	Bt-1130	D-0465	K.C.C.I.
52	Belmont	Bt-1131	D-0507	Cravat Coal Co.
53	Belmont	Bt-1132	D-0515	Marietta Coal Co.
58	Belmont	Bt-1129	D-0491	Marietta Coal Co.
59	Carroll	Cl-17	D-0282	James Bros. Coal Co.
61	Carroll	Cl-162	D-0408	James Bros. Coal Co.
62	Carroll	Cl-183	IM-7	Puskarich Limestone Co.
67	Carroll	Cl-225	D-0437	Buckeye-Industrial Mining Co.
71	Carroll	Cl-231	D-0530	Blum Coal Co.
98	Columbiana	Ca-919	D-0048, D-0412	Commercial Minerals, Inc.
112	Coshocton	Cn-799	D-0023, D-0668	Peabody Coal Co.
122	Coshocton	Cn-814	D-0489	R & F Coal Co.
123	Coshocton	Cn-779	D-0320	R & F Coal Co.
137	Belmont, Harrison	Hn-203	D-0174, D-0323	Consolidation Coal Co.
144	Harrison	Hn-738	D-0376	W. B. Coal Co.
146	Harrison	Hn-217	D-0440	Varkony Mining Co.
147	Harrison	Hn-218	D-0436	R & F Coal Co.
150	Harrison	Hn-700	D-0826 et al.	Consolidation Coal Co.
153	Harrison	Hn-739	D-0119	R & F Coal Co.
155	Harrison	Hn-M	D-0476	R & F Coal Co.
158	Hocking	Hg-295	D-0304	Valley Coal Corp.
161	Holmes	Hs-67	IM-768	Holmes Limestone Co.
162	Holmes, Wayne	Hs-79	IM-656	Holmes Limestone Co.
164	Holmes	Hs-86	D-0193, D-0508	Holmes Limestone Co.
165	Jackson	Jkn-367	IM-774, D-0273, D-0286, D-0594	Waterloo Coal Co., Inc.
167	Jackson	Jkn-548	D-0368	Milton Mining Co., Inc.
171	Jackson	Jkn-576	D-0204	Elk Coal, Inc.
172	Jackson	Jkn-561	D-0239	Stewart Coal Co.
175	Jackson	Jkn-1054	D-0205	LaMay Industries, Inc.
176	Jackson	Jkn-1055	D-0347	Sands Hill Coal Co., Inc.
178	Jefferson	Jfn-528	D-0247, D-0563, D-0665	Boich Mining Co.
180	Jefferson	Jfn-687	D-0404	Weirton Construction Co.
181	Jefferson	Jfn-703	D-0194, D-0736, D-0843	Zimnox Coal Co.
183	Jefferson	Jfn-720	D-0158	R & F Coal Co.
185	Jefferson	Jfn-780	D-0126	D & L Contractors, Inc.
186	Jefferson	Jfn-784	D-0728	F. & M. Coal Co.
189	Jefferson	Jfn-788	D-0327	Anthony Mining Co., Inc.
190	Jefferson	Jfn-789	D-0307	Anthony Mining Co., Inc.
193	Jefferson	Jfn-1267	D-0167	Ohio Edison Co.
195	Jefferson	Jfn-795	D-0487	Schiappa Coal Co., Inc.
196	Jefferson	Jfn-797	D-0469	S. & D. Construction Corp.
197	Jefferson	Jfn-801	D-0525	Ohio Coal & Construction Corp.
205	Mahoning	Mg-65	D-0374	Thompson Bros. Mining Co.
211	Mahoning	Mg-626	D-0468	East Fairfield Coal Co.
212	Meigs	Ms-293	D-0354	Southern Ohio Coal Co.
213	Meigs	Ms-294	D-0355	Southern Ohio Coal Co.
215	Monroe	Me-4	D-0422, D-0433	Quarto Mining Co. (Subsidiary of Consolidation Coal Co.)
217	Muskingum	Mum-237	D-0269	King Quarries, Inc.
228	Muskingum, Noble	Ne-41	D-0839 et al.	Central Ohio Coal Co.

**NUMERICAL INDEX OF OPERATORS OF MINES
SHOWN ON 1989 MINERAL INDUSTRIES MAP OF OHIO, BY COMMODITY—Continued**

COAL—Continued

<i>Map location number</i>	<i>County</i>	<i>State mine number</i>	<i>Division of Reclamation permit number</i>	<i>Name of operator</i>
231	Noble	Ne-146	D-0343	B & N Coal, Inc.
234	Noble	Ne-FC	D-0458	R & F Coal Co.
235	Perry	Py-265	D-0324	Peabody Coal Co.
239	Perry	Py-317	D-0057, D-0085, D-0189	Crooksville Coal Co., Inc.
246	Stark	Sk-208	D-0295	ENZ, Inc.
248	Stark	Sk-217	IM-750	Kohl Industries
250	Stark	Sk-221	D-0380	Hillcrest Coal, Ltd.
255	Stark	Sk-663	IM-5	East Ohio Limestone Co.
256	Tuscarawas	Ts-115	D-0190, D-0217, D-0398, D-0715	Empire Coal Co.
258	Tuscarawas	Ts-540	IM-28	Zoar Mining Co.
259	Tuscarawas	Ts-1526	D-0330	Eberhart Coal, Inc.
262	Tuscarawas	Ts-1727	IM-9	Kimble Clay & Limestone Co.
264	Tuscarawas	Ts-1884	IM-6	L & M Mineral Co.
267	Tuscarawas	Ts-1914	D-0701	L & M Mineral Co.
268	Tuscarawas	Ts-1917	D-0293	Puskarich Mining, Inc.
269	Tuscarawas	Ts-1918	D-0236	Red Malcuit, Inc.
270	Tuscarawas	Ts-1919	D-0075	Eberhart Coal, Inc.
276	Tuscarawas	Ts-1930	D-0482	L & M Mineral Co.
291	Tuscarawas	Ts-1963	D-0512	Empire Coal Co.
292	Tuscarawas	Ts-1964	D-0516	Empire Coal Co.
294	Vinton	Vn-163	D-0210	R. A. Eberts Co., Inc.
295	Vinton	Vn-173	D-0719	R & S Coal Co., Inc.
298	Vinton	Vn-623	D-0294	B. & D. Coal, Inc.
299	Vinton	Vn-641	D-0309	Sands Hill Coal Co., Inc.
300	Vinton	Vn-652	D-0463	Southern Ohio Coal Co.
301	Vinton	Vn-655	D-0004	Quality Coal Co.
304	Washington	Wn-1005	D-0183, D-0511	B & N Coal, Inc.
308	Belmont	Bt-1139	D-0452	R & F Coal Co.
309	Belmont	Bt-1143	D-0573	Cravat Coal Co.
312	Belmont	Bt-1148	D-0553	R & F Coal Co.
313	Belmont	Bt-1154	D-0510	R & F Coal Co.
314	Guernsey	Gy-304	D-0262	R & F Coal Co.
321	Columbiana	Ca-938	IM-937	Blum Coal Co.
323	Guernsey	Gy-305	D-0578	R. T. G., Inc.
326	Harrison	Hn-222	D-0587	Huberta Coal Co.
327	Harrison	Hn-223	D-0552	R & F Coal Co.
330	Hocking	Hg-321	D-0531	David Boyle, Inc.
331	Hocking	Hg-V	D-0519, D-0832	Valley Coal Corp.
336	Jefferson	Jfn-802	D-0500	R & F Coal Co.
337	Jefferson	Jfn-804	D-0564	Ohio Coal & Construction Corp.
351	Tuscarawas	Ts-1974	D-0580, D-0790	C. K. & K., Inc.
352	Tuscarawas	Ts-1978	D-0582	R & F Coal Co.
354	Tuscarawas	Ts-1980	D-0604	Valley Mining, Inc.
357	Vinton	Vn-172	D-0445	Benedict, Inc.
359	Vinton	Vn-181	D-0219	Quality Coal Co.
360	Carroll	Cl-233	D-0628	Regal Mining, Inc.
361	Columbiana	Ca-922	D-0005, D-0565	Johnson Mining Co.
363	Stark	Sk-235	IM-945	Holmes Limestone Co.
366	Stark	Sk-236	D-0632	Buckeye-Industrial Mining Co.
369	Columbiana	Ca-945	IM-958	K D Coal Co., Inc.
370	Belmont	Bt-1149	D-0411	Ohio Coal & Construction Corp.
379	Jackson	Jkn-1061	D-0627	Quality Coal Co.
383	Athens	As-A	D-0557	Avis Coal Co.
387	Belmont	Bt-1155	D-0637	Ohio Coal & Construction Corp.
391	Belmont	Bt-948	D-0348	Ohio River Collieries, Inc.
392	Columbiana	Ca-855	IM-891	Beaver Creek, Inc.
395	Columbiana	Ca-949	D-0625	Jeffco Sales & Mining Co.
396	Columbiana	Ca-962	D-0658	Coalbrook Mining, Inc.
398	Coshocton	Cn-820	D-0623	R & F Coal Co.
399	Harrison, Jefferson	Hn-225	D-0593	R & F Coal Co.
401	Jefferson	Jfn-807	D-0642	Ohio Coal & Construction Corp.
403	Tuscarawas	Ts-1992	D-0685	Eberhart Coal, Inc.
407	Stark	Sk-237	D-0653	Buckeye-Industrial Mining Co.

**NUMERICAL INDEX OF OPERATORS OF MINES
SHOWN ON 1989 MINERAL INDUSTRIES MAP OF OHIO, BY COMMODITY—Continued**

COAL—Continued

<i>Map location number</i>	<i>County</i>	<i>State mine number</i>	<i>Division of Reclamation permit number</i>	<i>Name of operator</i>
409	Tuscarawas	Ts-1949	D-0394	Empire Coal Co.
411	Tuscarawas	Ts-1982	IM-621	L & M Mineral Co.
412	Tuscarawas	Ts-1987	D-0667	Kimble Clay & Limestone Co.
414	Tuscarawas	Ts-1990	D-0654	Miller Mining, Inc.
415	Tuscarawas	Ts-K1	D-0203	Kimble Clay & Limestone Co.
416	Tuscarawas	Ts-K2	D-0413	Kimble Clay & Limestone Co.
417	Tuscarawas	Ts-1983	D-0690	Valley Mining, Inc.
418	Vinton	Vn-182	D-0631	R. A. Eberts Co., Inc.
419	Vinton	Vn-183	D-0633	Benedict, Inc.
420	Vinton	Vn-184	D-0524, D-0609	Benedict, Inc.
422	Vinton	Vn-186	D-0638	R. A. Eberts Co., Inc.
423	Vinton	Vn-187	D-0672	Benedict, Inc.
424	Belmont	Bt-1150	D-0597	Marietta Coal Co.
426	Holmes	Hs-94	D-0699	Miller Mining, Inc.
427	Carroll	Cl-237	D-0710	Carl Noble & Son, Inc.
429	Belmont	Bt-1160	D-0645	Cravat Coal Co.
431	Columbiana	Ca-961	D-0697	Center Mining Co.
433	Tuscarawas	Ts-1991	D-0702	Daron Coal Co., Inc.
434	Tuscarawas	Ts-1993	D-0709	C. K. & K., Inc.
435	Columbiana	Ca-963	D-0532	Buckeye-Industrial Mining Co.
441	Columbiana	Ca-348	IM-976	D. & D. Mining Co.
442	Coshocton	Cn-HI	D-0673	R & F Coal Co.
443	Harrison	Hn-227	D-0681	R & F Coal Co.
444	Coshocton	Cn-822	D-0708	R & R Minerals, Inc.
445	Coshocton	Cn-823	D-0714	G & M Mineral Co.
447	Carroll	Cl-238	D-0703	Buckeye-Industrial Mining Co.
450	Belmont	Bt-1162	D-0720	Marietta Coal Co.
452	Belmont	Bt-1164	D-0742	Marietta Coal Co.
454	Belmont	Bt-1166	D-0750	Joyce Coal Co., Inc.
456	Belmont	Bt-1168	D-0619	R & F Coal Co.
457	Belmont	Bt-1169	D-0684	R & F Coal Co.
458	Belmont	Bt-1170	D-0789	R & F Coal Co.
459	Belmont	Bt-1173	D-0675	Ohio Coal & Construction Corp.
460	Belmont	Bt-1175	D-0338	R & F Coal Co.
463	Carroll	Cl-239	D-0749	Regal Mining, Inc.
464	Carroll	Cl-240	D-0755	Myers Mining
465	Carroll	Cl-241	D-0782	Myers Mining
466	Carroll	Cl-242	D-0751	Buckeye-Industrial Mining Co.
467	Carroll	Cl-243	D-0805	Buckeye-Industrial Mining Co.
468	Carroll	Cl-H	D-0791	Horizon Coal Corp.
469	Columbiana	Ca-929	D-0730	Lisbon Coal Crushers, Inc.
470	Columbiana	Ca-944	IM-951	Blum Coal Co.
471	Columbiana	Ca-950	D-0768	Blum Coal Co.
472	Columbiana	Ca-951	D-0741	Commercial Minerals, Inc.
473	Columbiana	Ca-952	D-0764	John Glenn Mining
474	Columbiana	Ca-965	D-0591	Buckeye-Industrial Mining Co.
475	Columbiana	Ca-968	D-0760	East Fairfield Coal Co.
477	Coshocton	Cn-824	D-0679	R & F Coal Co.
478	Coshocton	Cn-825	D-0758	Sugarcreek Clay & Limestone, Inc.
479	Coshocton	Cn-826	D-0770	Miller Mining, Inc.
480	Harrison	Hn-233	D-0752	Cravat Coal Co.
481	Harrison	Hn-234	D-0614	R & F Coal Co.
482	Harrison	Hn-236	D-0436	R & F Coal Co.
483	Hocking	Hg-324	D-0754	Hocking Valley Mining
484	Hocking	Hg-325	D-0767	Tri-State Coal Sales, Inc.
485	Holmes	Hs-92	D-0624	Holmes Limestone Co.
487	Holmes	Hs-825	D-0529	Sugarcreek Clay & Limestone, Inc.
488	Jackson	Jkn-566	IM-871	Royal Oak Industries, Inc.
489	Jefferson	Jfn-813	D-0740	Valley Mining, Inc.
491	Lawrence	Le-450	D-0746	Belville Mining Co., Inc.
492	Muskingum	Mum-268	D-0254	Black Rock, Ltd.
493	Noble	Ne-1008	D-0706	B & N Coal, Inc.
494	Noble	Ne-149	D-0785, D-0786	B & N Coal, Inc.
495	Noble	Ne-150	D-0787	B & N Coal, Inc.
497	Perry	Py-340	D-0783	Buckingham Mining & Reclamation

**NUMERICAL INDEX OF OPERATORS OF MINES
SHOWN ON 1989 MINERAL INDUSTRIES MAP OF OHIO, BY COMMODITY—Continued**

COAL—Continued

<i>Map location number</i>	<i>County</i>	<i>State mine number</i>	<i>Division of Reclamation permit number</i>	<i>Name of operator</i>
498	Stark	Sk-214	D-0759	Wilmot Mining Co.
499	Tuscarawas	Ts-197	D-0802	Miller Mining, Inc.
501	Tuscarawas	Ts-1995	D-0718	Horizon Coal Corp.
502	Tuscarawas	Ts-1997	D-0651	Holmes Limestone Co.
503	Tuscarawas	Ts-1998	D-0735	Eberhart Coal, Inc.
504	Tuscarawas	Ts-1999	D-0738	Valley Mining, Inc.
505	Tuscarawas	Ts-2000	D-0744	J D Mining, Inc.
506	Tuscarawas	Ts-2002	D-0779	Miller Mining, Inc.
507	Tuscarawas	Ts-2003	D-0644	R & F Coal Co.
508	Tuscarawas	Ts-DW	D-0792	R & F Coal Co.
509	Tuscarawas	Ts-K3	D-0729	Kimble Clay & Limestone Co.
510	Tuscarawas	Ts-2007	D-0737	Red Malcuit, Inc.
511	Vinton	Vn-188	D-0761	Quality Coal Co.
512	Vinton	Vn-189	D-0766	McArthur Lumber & Post Co., Inc.
513	Vinton	Vn-S	D-0793	Sands Hill Coal Co., Inc.
514	Noble, Washington	Ne-151	D-0807	B & N Coal, Inc.
515	Belmont	Bt-1134	D-0496	J & W Mining Co.
516	Belmont	Bt-1176	D-0809	Bennoc, Inc.
517	Belmont	Bt-1177	D-0776	Marietta Coal Co.
518	Belmont	Bt-1178	D-0757	R & F Coal Co.
519	Belmont	Bt-1179	D-0840	K.C.C.I.
520	Belmont	Bt-1180	D-0847	Fairpoint Coal Co.
521	Belmont	Bt-1181	D-0846	R & F Coal Co.
522	Belmont	Bt-1182	D-0854	R & F Coal Co.
523	Belmont	Bt-1183	D-0845	Marietta Coal Co.
524	Belmont	Bt-1184	D-0799	Joyce Coal Co., Inc.
525	Belmont	Bt-146	D-0267	Cravat Coal Co.
526	Carroll	Cl-244	D-0814	Regal Mining, Inc.
527	Carroll	Cl-245	D-0848	Blum Coal Co.
528	Columbiana	Ca-972	D-0821	Kelly Coal Co.
529	Columbiana	Ca-978	D-0874	Buckeye-Industrial Mining Co.
530	Columbiana	Ca-K	D-0390	Kelly Coal Co.
531	Coshocton	Cn-A	D-0831	Algernon Coal Development Co., Inc.
532	Coshocton	Cn-PA	D-0850	R & F Coal Co.
534	Guernsey	Gy-310	D-0842	Empire Coal Co.
535	Harrison	Hn-237	D-0620	James A. Rogers
536	Harrison	Hn-747	D-0835	Sunnydale Mining Co.
537	Harrison	Hn-MN	D-0772	R & F Coal Co.
538	Holmes	Hs-97	D-0775	Holmes Limestone Co.
539	Jackson	Jkn-1064	D-0732	Stewart Coal Co.
540	Jackson	Jkn-E	D-0695	Elk Coal, Inc.
541	Jackson	Jkn-SH	D-0861	Sands Hill Coal Co., Inc.
542	Jefferson	Jfn-814	D-0180	Ohio Coal & Construction Corp.
543	Jefferson	Jfn-816	D-0825	C L A Coal Co.
544	Jefferson	Jfn-817	D-0860	R & F Coal Co.
545	Jefferson	Jfn-P2	D-0798	R & F Coal Co.
546	Lawrence	Le-451	D-0726	Waterloo Coal Co., Inc.
547	Muskingum	Gy-308	D-0724	Thompson Mining Co.
548	Muskingum	Mum-239	D-0428	Sands Mining Corp.
549	Muskingum	Mum-244	D-0388	Cravat Coal Co.
550	Noble	Ne-147	D-0453	R & F Coal Co.
551	Noble	Ne-152	D-0859	King Quarries, Inc.
552	Perry	Py-335	D-0615	Crooksville Coal Co., Inc.
553	Tuscarawas	Ts-198	D-0824	J D Mining, Inc.
554	Tuscarawas	Ts-2004	D-0812	J D Mining, Inc.
555	Tuscarawas	Ts-2005	D-0769	Valley Mining, Inc.
556	Tuscarawas	Ts-2006	D-0800	R. & E. Coal Co.
557	Tuscarawas	Ts-2008	D-0833	Miller Mining, Inc.
558	Tuscarawas	Ts-2009	D-0811	Miller Mining, Inc.
559	Tuscarawas	Ts-2010	D-0849	Miller Mining, Inc.
560	Tuscarawas	Ts-2011	D-0822	Valley Mining, Inc.
561	Tuscarawas	Ts-J	D-0837	Horizon Coal Corp.
562	Tuscarawas	Ts-JD	D-0858	J D Mining, Inc.
563	Vinton	Vn-B	D-0836	B. & D. Coal, Inc.
564	Vinton	Vn-BD	D-0207	B. & D. Coal, Inc.
565	Coshocton	Hs-97	D-0589	Holmes Limestone Co.

**NUMERICAL INDEX OF OPERATORS OF MINES
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COAL-PREPARATION PLANTS ◆

<i>Map location number</i>	<i>County</i>	<i>State mine number</i>	<i>Division of Reclamation permit number</i>	<i>Name of operator</i>
1	Belmont	Bt-108		R & F Coal Co.
2	Belmont	Bt-643	D-0328	Saginaw Mining Co.
3	Belmont	Bt-936	D-0216	Marietta Coal Co.
4	Belmont	Bt-68	D-0360	Ohio Valley Coal Co.
5	Columbiana	Ca-879	D-0228	Buckeye-Industrial Mining Co.
7	Coshocton	Cn-810		Conesville Coal Preparation Co.
8	Harrison	Hn-212	D-0192	Consolidation Coal Co.
9	Jackson	Jkn-1055	D-0347	Sands Hill Coal Co., Inc.
10	Jackson	Jkn-367	D-0285	Waterloo Coal Co., Inc.
11	Jefferson	Jfn-1290	D-0211	Route Forty-Three Washer
12	Jefferson	Jfn-647	D-0492	Ohio Coal & Construction Corp.
13	Mahoning	Mg-623	D-0214	East Fairfield Coal Co.
14	Meigs	Ms-293	D-0354	Southern Ohio Coal Co.
15	Monroe	Me-4	D-0422	Quarto Mining Co. (subsidiary of Consolidation Coal Co.)
16	Morgan	Ne-41	D-0420	Central Ohio Coal Co.
17	Perry	Py-248	D-0325	Peabody Coal Co.
18	Perry	Py-317	D-0248	Crooksville Coal Co., Inc.
19	Tuscarawas	Ts-115	D-0199	Empire Coal Co.
20	Tuscarawas	Ts-1938	D-0381	Central Fuel Co.
21	Tuscarawas	Ts-1942	D-0287	Horizon Coal Corp.
22	Vinton	Vn-145	D-0159	Benedict, Inc.
23	Vinton	Vn-178	D-0185	Jaymar Coal Co.
24	Vinton	Vn-641	D-0169	Sands Hill Coal Co., Inc.
26	Belmont	Bt-878	D-0230	Cravat Coal Co.
27	Wayne	Hs-79	D-0283	Holmes Limestone Co.
28	Muskingum	Mum-239	D-0428	Sands Mining Corp.

LIMESTONE/DOLOMITE ■

<i>Map location number</i>	<i>County</i>	<i>State mine number</i>	<i>Division of Reclamation permit number</i>	<i>Name of operator</i>
1	Adams	Ads-1	IM-237	Davon, Inc.
2	Adams	Ads-6	IM-659	Standard Slag Co.
3	Allen	An-1	IM-485	Bluffton Stone Co.
4	Allen	An-2	IM-540	National Lime & Stone Co.
5	Allen	An-3	IM-484	National Lime & Stone Co.
6	Allen	An-11	IM-541	National Lime & Stone Co.
7	Allen	An-4	IM-491	Suever Stone Co., Inc.
9	Athens	As-533	IM-17	R. A. Eberts Co., Inc.
10	Auglaize	Ae-31	IM-744	Con-Ag, Inc.
11	Auglaize	Ae-10	IM-486	National Lime & Stone Co.
12	Belmont	Bt-716	IM-1	Ayers Limestone Quarry, Inc.
13	Belmont	Bt-119	IM-733	Cravat Coal Co.
14	Brown	Bn-1		Brown County Rock Crusher
15	Carroll	Cl-183	IM-7	Puskarich Limestone Co.
16	Clark	Ck-1	IM-373	American Aggregates Corp.
17	Clinton	Cln-1	IM-241	Melvin Stone Co.
18	Crawford	Cd-1	IM-404	National Lime & Stone Co.
19	Darke	Dke-1	IM-362	American Aggregates Corp.
20	Delaware	Del-4	IM-262	American Aggregates Corp.
21	Delaware	Del-5	IM-207	National Lime & Stone Co.
22	Delaware	Del-3	IM-327	Owens Stone Co., Inc.
23	Delaware	Del-2	IM-299	Penry Stone Co.
24	Erie	Ee-27	IM-608	Erie Blacktop, Inc.
25	Erie	Ee-11	IM-263	Rogers Group, Inc. (dba Sandusky Crushed Stone Co.)
26	Erie	Ee-1	IM-310	Wagner Quarries Co.
27	Fayette	Fe-2	IM-169	American Aggregates Corp.
28	Fayette	Fe-1	IM-831	Melvin Stone Co.
30	Franklin	Fn-2	IM-261	American Aggregates Corp.
31	Franklin	Fn-53	IM-185	American Aggregates Corp.
32	Greene	Ge-17	IM-435	American Aggregates Corp.

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LIMESTONE/DOLOMITE—Continued

<i>Map location number</i>	<i>County</i>	<i>State mine number</i>	<i>Division of Reclamation permit number</i>	<i>Name of operator</i>
33	Clark, Greene	Ge-1	IM-393	Southwestern Portland Cement Co.
34	Greene	Ge-9	IM-364	Southwestern Portland Cement Co.
35	Hancock	Hk-1	IM-483	National Lime & Stone Co.
36	Hancock	Hk-4	IM-489	Pifer Stone Co.
37	Hancock	Hk-2	IM-439	Tarbox-McCall Stone Co. (Division of Hancock Ready Mix, Inc.)
38	Hardin	Hdn-2	IM-443	Hardin Quarry Co., Inc.
41	Highland	Hd-2	IM-230	Davon, Inc.
42	Highland	Hd-3	IM-253	Ohio Asphaltic Limestone Corp.
43	Highland	Hd-4	IM-406	Marshall Quarry, Inc.
44	Holmes	Hs-67	IM-768	Holmes Limestone Co.
45	Holmes, Wayne	Hs-79	IM-656	Holmes Limestone Co.
46	Jackson	Jkn-583	IM-894	D & J Energy, Inc.
47	Jackson	Jkn-367	IM-774, D-0273, D-0286, D-0594	Waterloo Coal Co., Inc.
49	Logan	Lgn-1	IM-574	Connolly Construction Co., Inc.
50	Logan	Lgn-15	IM-453	C. E. Duff & Son, Inc.
51	Logan	Lgn-2	IM-494	Northwood Stone & Asphalt Co.
52	Lucas	Ls-1	IM-575	The France Stone Co.
53	Lucas	Ls-3	IM-580	The France Stone Co.
54	Lucas	Ls-2	IM-503	Stoneco, Inc.
55	Mahoning	Mg-43	IM-723	Heiser Stone Co.
56	Mahoning	Mg-54	IM-93	Honey Creek Stone Co.
57	Mahoning	Mg-608	IM-4	U.S. Cement, Inc.
59	Marion	Mn-2	IM-423	J. M. Hamilton & Sons Co., Inc.
60	Marion	Mn-3	IM-168	National Lime & Stone Co.
61	Marion	Mn-1	IM-250	Tri-County Limestone Co.
62	Mercer	Mr-1	IM-592	Stoneco, Inc.
63	Mercer	Mr-2	IM-430	S & S Aggregate, Inc.
64	Miami	Mi-1	IM-382	Piqua Materials, Inc.
65	Miami	Mi-16	IM-414	Gregory Stone Co., Inc.
66	Miami	Mi-502	IM-414	Ludlow Stone, Inc.
67	Miami	Mi-10	IM-335	C. F. Poeppelman, Inc.
69	Monroe	Me-501	IM-76	Christman Quarry
70	Montgomery	My-1	IM-374	American Aggregates Corp.
71	Montgomery	My-23	IM-368	American Aggregates Corp.
72	Montgomery	My-58	IM-330	Southwestern Portland Cement Co.
73	Morgan	Mon-600	IM-281	Central Ohio Coal Co.
75	Muskingum	Mum-106	IM-297	Chesterhill Stone Co.
76	Muskingum	Mum-24	IM-830	Columbia Portland Cement Corp.
78	Muskingum	Mum-104	IM-277	Sidwell Bros., Inc.
79	Noble	Ne-106	IM-85	King Limestone, Inc.
80	Monroe, Noble	Ne-86	IM-70	Zerger's Quarry
82	Ottawa	Oa-6	IM-296	Edward Kraemer & Sons, Inc.
83	Ottawa	Oa-14	IM-320	Stoneco, Inc.
84	Ottawa	Oa-7	IM-440	Standard Slag Co.
85	Ottawa	Oa-1	IM-292	U.S. Gypsum Co.
86	Paulding	Pg-7		The France Stone Co.
87	Paulding	Pg-1	IM-513	Lafarge Corp.
88	Paulding	Pg-2	IM-481	Stoneco, Inc.
89	Perry	Py-235	IM-11, IM-515	Maxville Quarries, Inc.
91	Pike	Pke-13	IM-213	Latham Limestone, Inc.
92	Pickaway	Pky-4	IM-209	Melvin Stone Co.
95	Preble	Pre-5	IM-447	Wysong Stone Co.
98	Putnam	Pm-2	IM-570	Putnam Stone Co.
100	Sandusky	Sy-6	IM-346	France Stone Co.
101	Sandusky	Sy-5	IM-259	Gotttron Bros. Co.
102	Sandusky	Sy-1	IM-537	Martin Marietta Magnesia Specialities, Inc.
103	Sandusky	Sy-4	IM-381	Steetley Resources, Inc., Ohio Lime Co.
104	Sandusky	Sy-8	IM-282	Steetley Resources, Inc., Ohio Lime Co.
106	Seneca	Sa-2	IM-352	Maple Grove Stone Co.
107	Seneca	Sa-1	IM-347	The France Stone Co.
108	Seneca	Sa-3	IM-349	The France Stone Co.
109	Seneca	Sa-8	IM-313	North Shore Stone Quarries, Inc.
110	Shelby	Shy-6	IM-389	Miami River Stone Co.

**NUMERICAL INDEX OF OPERATORS OF MINES
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LIMESTONE/DOLOMITE—Continued

<i>Map location number</i>	<i>County</i>	<i>State mine number</i>	<i>Division of Reclamation permit number</i>	<i>Name of operator</i>
111	Shelby	Shy-16	IM-411	Sidney Sand & Gravel Co.
112	Shelby	Shy-15	IM-387	Spring Creek Corp.
113	Stark	Sk-663	IM-5	East Ohio Limestone Co.
114	Stark	Sk-217	IM-750	Kohl Industries
117	Tuscarawas	Ts-1818	IM-9	Kimble Clay & Limestone Co.
118	Tuscarawas	Ts-1928	IM-98	Sugarcreek Clay & Limestone, Inc.
119	Union	Un-1	IM-208	L. G. Rockhold & Sons, Inc.
120	Union	Un-2	IM-236	Union Aggregates Co.
121	Van Wert	Vt-3	IM-495	Stoneco, Inc.
122	Van Wert	Vt-7	IM-642	Ridge Township Quarry
123	Van Wert	Vt-1	IM-500	Suever Stone Co., Inc.
124	Vinton	Vn-174	D-0309	G & M Supply, Inc. (dba Clinton Stone, Inc.)
125	Warren	Wan-35	IM-112	American Aggregates Corp.
128	Wood	Wd-2	IM-576	The France Stone Co.
129	Wood	Wd-5	IM-473	The France Stone Co.
130	Wood	Wd-1	IM-548	MacRitchie Materials, Inc.
131	Wood	Wd-6	IM-480	Stoneco, Inc.
132	Wood	Wd-11	IM-475	Stoneco, Inc.
133	Wyandot	Wt-3	IM-298	McCarthy Stone Quarry
134	Wyandot	Wt-1	IM-405	National Lime & Stone Co.
135	Wyandot	Wt-8	IM-273	Wyandot Dolomite, Inc.
136	Tuscarawas	Ts-1961	IM-845	Fuhrer Farms & Mining
137	Perry	Py-330	IM-898	Crooksville Coal Co., Inc.
138	Noble	Ne-147	IM-921	Central Ohio Coal Co.
140	Lawrence	Le-403	D-0536	Belville Mining Co., Inc.
141	Muskingum	Ne-41	D-0559	Central Ohio Coal Co.
142	Greene	Ge-25	IM-437	American Aggregates Corp.
143	Montgomery	My-32	IM-1012	American Aggregates Corp.
144	Muskingum	Mum-269	IM-1009	Salt Creek Materials, Inc.
145	Erie	Ee-31	IM-1044	Wagner Quarries Co.
146	Coshocton	Cn-830	IM-1049	Sidwell Bros., Inc.
147	Guernsey, Muskingum	Gy-309	IM-1030	King Limestone, Inc.
148	Vinton	Vn-190	D-0761	Quality Stone Co.
149	Hancock	Hk-7	IM-1002	National Lime & Stone Co.

SAND AND GRAVEL DREDGING OPERATION ▲

<i>Map location number</i>	<i>County</i>	<i>State mine number</i>	<i>Division of Reclamation permit number</i>	<i>Name of operator</i>
1		Ee-D		Erie Sand & Gravel Co.
2		Lke-D		Osborne Materials Co.
3		Ls-D		White Bros. Sand, Inc.

SAND AND GRAVEL ▲

<i>Map location number</i>	<i>County</i>	<i>State mine number</i>	<i>Division of Reclamation permit number</i>	<i>Name of operator</i>
2	Allen	An-15	IM-721	Ward Materials, Inc.
6	Ashland	Ald-9	IM-745	Ries Sand & Gravel
8	Ashland	Ald-7	IM-392	Young's Sand & Gravel Co.
9	Ashtabula	Asa-10	IM-198	Frye Sand & Gravel, Inc.
10	Ashtabula	Asa-14	IM-563	Janson Soil Service, Inc.
11	Ashtabula	Asa-17	IM-886	Kinsman Sand & Gravel Co.
13	Ashtabula	Asa-11	IM-160	Nelson Sand & Gravel, Inc.
14	Ashtabula	Asa-12	IM-911	Nelson Sand & Gravel, Inc.
15	Ashtabula	Asa-15	IM-783	R. W. Sidley, Inc.
19	Athens	As-588	IM-630	Black Top Contracting, Inc.

**NUMERICAL INDEX OF OPERATORS OF MINES
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SAND AND GRAVEL—Continued

<i>Map location number</i>	<i>County</i>	<i>State mine number</i>	<i>Division of Reclamation permit number</i>	<i>Name of operator</i>
21	Athens	As-1161	IM-97	Lake Hope Asphalt, Inc.
23	Auglaize	Ae-23	IM-508	Joseph Sand & Gravel
24	Auglaize	Ae-30	IM-598	National Lime & Stone Co.
25	Auglaize	Ae-16	IM-595	Quality Ready Mix, Inc.
26	Belmont	Bt-74	IM-288	Tri-State Asphalt Productions
28	Butler	Br-36	IM-649	V. I. P. Contractors, Inc.
29	Butler	Br-5	IM-153	American Aggregates Corp.
30	Butler	Br-35	IM-200	American Aggregates Corp.
31	Butler	Br-48	IM-562	Broshear Contractors, Inc.
32	Butler	Br-50	IM-739	Dingledine Trucking Service
33	Butler	Br-14	IM-147	Dravo Basic Materials Co., Inc.
34	Butler	Br-29	IM-149	Dravo Basic Materials Co., Inc.
36	Butler	Br-53	IM-903	Fairfield Ready Mix
37	Butler	Br-40	IM-493	Indian Creek Sand & Gravel Co.
38	Butler	Br-52	IM-814	Martin Farms, Inc.
39	Butler	Br-15	IM-316	Mecco, Inc.
41	Butler	Br-6	IM-177	Weidle Sand & Gravel, Inc.
42	Butler	Br-3	IM-719	New Miami Sand & Gravel, Inc.
44	Butler	Br-47	IM-111	Watson Gravel, Inc.
45	Butler	Br-38	IM-218	Welch Sand & Gravel, Inc.
47	Carroll	Cl-204	IM-554	Oneida Sand & Gravel, Inc.
48	Champaign	Cpn-1	IM-371	American Aggregates Corp.
49	Champaign	Cpn-21	IM-616	D & W Sand & Gravel
50	Champaign	Cpn-22	IM-889	Mechanicsburg Sand & Gravel, Inc.
51	Champaign	Cpn-20	IM-482	Moore's Excavating Co.
52	Clark	Ck-13	IM-366	American Aggregates Corp.
54	Clark	Ck-502	IM-375	Demmy Sand & Gravel
57	Clark	Ck-3	IM-463	Hilltop Basic Resources, Inc. (dba Enon Washed Sand & Gravel Co.)
58	Clark	Ck-25	IM-358	Springfield Sand & Gravel Co.
59	Clermont	Ct-9	IM-526	Barrett Paving Materials, Inc.
61	Clermont	Ct-7	IM-432	Kipp's Gravel Co., Inc.
64	Columbiana	Ca-855	IM-891	Beaver Creek, Inc.
68	Columbiana	Ca-881	IM-611	X L Sand & Gravel
69	Coshocton	Cn-718	IM-227	Apache Aggregate & Paving Co.
70	Coshocton	Cn-783	IM-717	Apache Aggregate & Paving Co.
71	Coshocton	Cn-694	IM-293	Boyd Gravel Co.
72	Coshocton	Cn-624	IM-243	Spring Industries, Inc.
75	Crawford	Cd-3	IM-693	Gibson Sand & Gravel Co.
80	Darke	Dke-4	IM-433	Foureman's Sand & Gravel, Inc.
81	Darke	Dke-10	IM-326	Tom Hollinger Excavating
82	Defiance	De-2	IM-765	Hillsdale Sand & Gravel, Inc.
83	Erie	Ee-18	IM-676	Elmer Borchardt, Inc.
84	Erie	Ee-29		Jarrett Sand Co.
85	Erie	Ee-5		Keener Sand & Clay Co.
86	Erie	Ee-24	IM-915	Mesenburg Bros., Inc.
87	Erie	Ee-28	IM-601	Miller Sand Co.
91	Fairfield	Fd-12	IM-451	Davis Sand & Gravel
92	Fairfield	Fd-13	IM-848	Lancaster Sand & Gravel Co.
94	Franklin	Fn-36	IM-302	Agg Rok Materials (Division of Wapak Sand & Gravel Co.)
95	Franklin	Fn-6	IM-185	American Aggregates Corp.
96	Franklin	Fn-23	IM-183	American Aggregates Corp.
97	Franklin	Fn-14	IM-832	Big Walnut Sand & Gravel Co.
98	Franklin	Fn-52	IM-191	J. P. Sand & Gravel Co.
99	Franklin	Fn-54	IM-847	L. & M. Excavators, Inc.
100	Franklin	Fn-11	IM-234	Mason's Sand & Gravel Co.
101	Franklin	Fn-24	IM-266	S & S Aggregate, Inc.
102	Franklin	Fn-43	IM-188	Olen Corp.
105	Gallia	Ga-243	IM-238	M. T. Epling Co.
106	Gallia	Ga-245		M. T. Epling Co.
108	Geauga	Gea-29	IM-215	Haueter Sand & Gravel, Inc.
109	Geauga	Gea-35	IM-321	Teague Gravel Co., Inc.
110	Greene	Ge-33	IM-379	American Aggregates Corp.
112	Clark, Greene	Ge-4	IM-394	Hilltop Basic Resources, Inc.
115	Greene	Ge-36	IM-305	Phillips Sand & Gravel

**NUMERICAL INDEX OF OPERATORS OF MINES
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SAND AND GRAVEL—Continued

<i>Map location number</i>	<i>County</i>	<i>State mine number</i>	<i>Division of Reclamation permit number</i>	<i>Name of operator</i>
117	Greene	Ge-10	IM-518	Xenia Sand, Gravel, & Asphalt Co.
118	Hamilton	Hmn-37	IM-170	American Aggregates Corp.
119	Hamilton	Hmn-AAC	IM-716	American Aggregates Corp.
120	Hamilton	Hmn-54	IM-710	Ashcraft Sand & Gravel
121	Hamilton	Hmn-44	IM-120	Barrett Paving Materials, Inc.
123	Hamilton	Hmn-50	IM-205	James Bunnell, Inc.
124	Hamilton	Hmn-59	IM-815	James Bunnell, Inc.
126	Hamilton	Hmn-3	IM-137, IM-801	Dravo Basic Materials Co., Inc.
127	Hamilton	Hmn-5	IM-148	Dravo Basic Materials Co., Inc.
128	Hamilton	Hmn-11, Hmn-70	IM-133	Dravo Basic Materials Co., Inc.
131	Hamilton	Hmn-68	IM-747	Dravo Basic Materials Co., Inc.
135	Hamilton	Hmn-17	IM-295	Harrison Sand & Gravel Co.
139	Hamilton	Hmn-10	IM-226	Rack Sand, Inc.
141	Hamilton	Hmn-28	IM-353	The Gravel Co., Three Rivers Sand & Gravel, Inc.
142	Hamilton	Hmn-60	IM-761	Watson Gravel, Inc.
143	Hamilton	Hmn-42	IM-823	Welch Sand & Gravel, Inc.
144	Hamilton	Hmn-48	IM-220	Welch Sand & Gravel, Inc.
147	Henry	Hy-5		Gerken Materials, Inc.
150	Hocking	Hg-296	IM-559	Hocking County Engineer
151	Hocking	Hg-262	IM-41	Hocking Valley Concrete, Inc.
152	Hocking	Hg-301	IM-458	Muskingum River Gravel Co.
153	Holmes	Hs-82	IM-707	Menuet Bros. Sand & Gravel, Inc.
154	Holmes	Hs-511	IM-345	Feikert Sand & Gravel, Inc.
157	Huron	Hrn-1	IM-550	Price Sand & Gravel (Division of Price Asphalt & Paving Co.)
159	Knox	Kx-13	IM-343	Fredericktown Sand & Gravel Co.
160	Knox	Kx-7	IM-235	Goodwin Sand & Gravel, Inc.
161	Knox	Kx-16	IM-793	Olen Corp.
162	Knox	Kx-5	IM-884	Mickley Gravel Co.
163	Knox	Kx-3	IM-300	Purdy Sand & Gravel Co., Sant Sand & Gravel, Inc.
165	Knox	Kx-15	IM-967	Small's Sand & Gravel, Inc.
166	Lake	Lke-7	IM-162	R. W. Sidley, Inc.
167	Lawrence	Le-430	IM-844	Becky Lane Trucking, Inc.
170	Lawrence	Le-426	IM-856	Burlington Sand & Gravel Co.
173	Licking	Lg-8	IM-271	Newark Asphalt Co.
174	Licking	Lg-2	IM-184	American Aggregates Corp.
176	Licking	Lg-31	IM-246	Dry Creek Gravel Co.
177	Licking	Lg-DC	IM-354	Dry Creek Gravel Co.
179	Licking	Lg-10	IM-217	Van Wey Sand & Gravel, Inc.
180	Licking	Lg-15		Walter's Gravel
181	Licking	Lg-38	IM-695	York Road Gravel Co.
182	Logan	Lgn-31	IM-454	C. E. Duff & Son, Inc.
183	Logan	Lgn-39	IM-887	C. E. Duff & Son, Inc.
189	Logan	Lgn-6	IM-459	Neer's Sand & Gravel
190	Logan	Lgn-38	IM-881	Cummins Family Contracting
191	Lorain	Ln-12	IM-731	Belu & Son Paving, Inc.
195	Lucas	Ls-13	IM-492	Seaway Sand & Stone, Inc.
196	Mahoning	Mg-NSG	IM-808	Neiheisel Sand & Gravel
197	Marion	Mn-16	IM-171	Fleming Construction Co., Inc., Scioto Sand & Gravel
198	Marion	Mn-4	IM-290	Penry Stone Co.
200	Marion	Mn-10	IM-196	Union Aggregates Co.
201	Marion	Mn-12	IM-197	Union Aggregates Co.
202	Medina	Ma-4	IM-426, IM-442	Baker Sand, Inc.
203	Medina	Ma-20	IM-448	Baker Sand, Inc.
205	Medina	Ma-12	IM-516	Ramsier Sand & Gravel
206	Medina	Ma-22	IM-425, IM-650, IM-651	Seville Sand & Gravel, Inc.
208	Medina	Ma-16		Silchuk Gravel Co.
209	Meigs	Ms-205	IM-30	Dravo Basic Materials Co., Inc.
210	Meigs	Ms-295		Humphrey Farms
211	Meigs	Ms-301	IM-619	Meigs County Commissioners
212	Meigs	Ms-298	IM-32	Richards & Son, Inc.
216	Miami	Mi-6	IM-356	American Aggregates Corp.
217	Miami	Mi-501		New Carlisle Sand & Gravel Co.
219	Miami	Mi-3	IM-462	American Aggregates Corp.

**NUMERICAL INDEX OF OPERATORS OF MINES
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SAND AND GRAVEL—Continued

<i>Map location number</i>	<i>County</i>	<i>State mine number</i>	<i>Division of Reclamation permit number</i>	<i>Name of operator</i>
220	Miami	Mi-8	IM-355	American Aggregates Corp.
221	Miami	Mi-9	IM-408	Wise Gravel
222	Miami	Mi-4	IM-472	Fenner Sand & Gravel, Inc.
223	Montgomery	My-33	IM-361	American Aggregates Corp.
224	Montgomery	My-66	IM-677	American Aggregates Corp.
225	Montgomery	My-65	IM-594	Broadway Sand & Gravel, Inc.
228	Montgomery	My-67	IM-725	Carpenter's Excavating
229	Montgomery	My-68	IM-646	H & H Utilities Co.
232	Montgomery	My-19	IM-401	Hilltop Basic Resources, Inc.
233	Montgomery	My-52	IM-348	Miller Bros. Gravel, Inc.
235	Montgomery	My-49	IM-370	Northmont Sand & Gravel Co.
236	Montgomery	My-55	IM-571	Partin Sand & Gravel
238	Montgomery	My-61	IM-468	Tipp Stone Co., Inc.
239	Montgomery	My-41	IM-360	Weidle Sand & Gravel, Inc.
240	Morgan	Mon-588	IM-35	Chesterhill Stone Co.
241	Morgan	Mon-599		Huck Farms
242	Morrow	Mw-10	IM-258	Chesterville Sand & Gravel Co., Inc.
243	Muskingum	Mum-863	IM-264	Cox Gravel Co., Inc.
244	Muskingum	Mum-799	IM-317	Cox Gravel Co., Inc.
245	Muskingum	Mum-736	IM-804	Muskingum River Gravel Co.
247	Muskingum	Mum-228	IM-421	Muskingum River Gravel Co.
248	Muskingum	Mum-216	IM-689	Salt Creek Materials, Inc.
251	Pickaway	Pky-1	IM-409, IM-428, IM-668	American Aggregates Corp.
252	Pike	Pke-26	IM-142	Valley Materials Co.
253	Pike	Pke-23	IM-242	Chattin Concrete
254	Pike	Pke-30	IM-786	Gregory Materials Co.
255	Pike	Pke-24	IM-222	Standard Slag Co.
256	Portage	Pe-50	IM-96	Beck Sand & Gravel, Inc.
257	Portage	Pe-15	IM-104	Karl Brugmann Sand & Gravel, Inc.
258	Portage	Pe-9	IM-119	Oscar Brugmann Sand & Gravel, Inc.
259	Portage	Pe-17	IM-123	Charlestown Sand & Gravel
260	Portage	Pe-84	IM-868	Aurora Sand & Gravel Co.
261	Portage	Pe-45	IM-139	R. A. Cruise Sand & Gravel, Inc.
262	Portage	Pe-56	IM-127	Hilltop Aggregate, Inc.
264	Portage	Pe-10	IM-138	Hugo Sand Co.
265	Portage	Pe-63	IM-82	Jefferson Materials Co.
266	Portage	Pe-83	IM-179	Karg Sand & Gravel Co.
268	Portage	Pe-40	IM-190	Lakeside Sand & Gravel Co.
272	Portage	Pe-39	IM-174	Miller Sand & Gravel Co.
273	Portage	Pe-85	IM-700	Northern Ohio Materials, Inc.
274	Portage	Pe-60	IM-78	Schloss Paving Co.
275	Portage	Pe-18	IM-193	Sober Sand & Gravel Co.
276	Portage	Pe-36	IM-90	Solon Excavators Sand & Gravel, Inc.
277	Portage	Pe-68	IM-143, IM-687	Standard Slag Co.
278	Portage	Pe-SS1	IM-660	Standard Slag Co.
280	Portage	Pe-64	IM-229	Rainbow Sand & Gravel, Inc.
281	Portage	Pe-59	IM-210	S & S Aggregate, Inc.
282	Portage	Pe-67	IM-202	S & S Aggregate, Inc.
284	Preble	Pre-7	IM-306	Southern Ohio Aggregates
285	Preble	Pre-4	IM-477	Wysong Gravel Co.
286	Preble	Pre-6	IM-478	Wysong Gravel Co.
287	Richland	Rd-4	IM-279	D. H. Bowman & Sons, Inc.
289	Richland	Rd-18	IM-670	Ganges Gravel
290	Richland	Rd-14	IM-436	John L. Garber Materials, Inc.
297	Ross	Rs-26	IM-922	Elm Spring Farm
298	Ross	Rs-24	IM-735	Haubeil & Sons Asphalt & Materials, Inc.
303	Scioto	So-98	IM-474	E. E. Blair Construction Co.
304	Scioto	So-83	IM-211	Cunningham Asphalt Paving, Inc.
305	Scioto	So-78		Schilling Contractors, Inc.
306	Scioto	So-79	IM-221	Standard Slag Co.
310	Shelby	Shy-12	IM-528	Fleckenstein Farm Gravel Pit
311	Shelby	Shy-17	IM-389	Miami River Stone Co.
312	Shelby	Shy-13	IM-412	Sidney Sand & Gravel Co.
314	Shelby	Shy-11	IM-743	Spring Creek Corp.
315	Shelby	Shy-18	IM-388	Spring Creek Corp.

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SAND AND GRAVEL—Continued

<i>Map location number</i>	<i>County</i>	<i>State mine number</i>	<i>Division of Reclamation permit number</i>	<i>Name of operator</i>
316	Stark	Sk-N	IM-156	Northern Ohio Paving Co.
318	Stark	Sk-681	IM-164	Canton Aggregate
319	Stark	Sk-689	IM-173	Canton Aggregate
320	Stark	Sk-694	IM-858	A. J. Diana Sons, Inc.
323	Stark	Sk-688	IM-763	Heiser Sand & Gravel
325	Stark	Sk-607	IM-102	Massillon Washed Gravel Co.
326	Stark	Sk-165	IM-192, IM-781	Oster Sand & Gravel, Inc.
327	Summit	St-52	IM-900	Flesher Sand & Gravel, Inc.
328	Summit	St-39	IM-983	Lerkis Asphalt Co., Inc.
330	Summit	St-46	IM-557	H. M. Miller Construction Co.
333	Summit	St-24	IM-239	Riverside Sand & Gravel Co., Inc.
334	Summit	St-9	IM-167	Rubber City Sand & Gravel Co.
335	Summit	St-26	IM-803	Spring Valley Investments, Inc.
336	Summit	St-44	IM-178	S & S Aggregate, Inc.
337	Summit	St-29	IM-203	American Sand & Gravel
340	Ashtabula, Trumbull	Tl-12	IM-131	Samco, Inc.
342	Tuscarawas	Ts-1852	IM-75	Oster Sand & Gravel, Inc.
343	Tuscarawas	Ts-1826	IM-88	Soehnl Bros. Sand & Gravel, Inc.
344	Tuscarawas	Ts-1771	IM-77	Spring Industries, Inc.
345	Tuscarawas	Ts-1788	IM-73	Spring Industries, Inc.
346	Tuscarawas	Ts-111	IM-55	Stewart & Reichman, Inc.
347	Tuscarawas	Ts-69	IM-51	Stocker Sand & Gravel Co.
348	Tuscarawas	Ts-125	IM-50	Stocker Sand & Gravel Co.
349	Warren	Wan-38	IM-615	American Aggregates Corp.
352	Warren	Wan-41	IM-629	Dravo Basic Materials Co., Inc., Carl E. Oeder & Sons Sand & Gravel
356	Warren	Wan-47	IM-846	C & S Contractors, Inc.
357	Warren	Wan-8	IM-240	L & I Trucking & Construction, Inc.
363	Warren	Wan-10	IM-465	Watson Gravel, Inc.
364	Washington	Wn-55	IM-669	Beverly Slag Co.
365	Washington	Wn-508	IM-57	Briggs Sand & Gravel, Inc.
366	Washington	Wn-56	IM-857	Chesterhill Stone Co.
367	Washington	Wn-38	IM-701	Muskingum River Gravel Co.
369	Washington	Wn-510	IM-25	Trout Sand & Gravel Co.
370	Washington	Wn-43	IM-61	Union Slag Corp.
371	Washington	Wn-44	IM-63	Union Slag Corp.
372	Wayne	We-11	IM-547	Prairie Lane Gravel Co.
373	Wayne	We-7	IM-471	Rupp Construction, Inc.
374	Wayne	We-15	IM-398	Zollinger Sand & Gravel Co.
375	Williams	Ws-6	IM-497	Stoneco, Inc.
376	Williams	Ws-9	IM-498	Stoneco, Inc.
377	Defiance, Williams	Ws-11	IM-509, IM-661	Weber Sand & Gravel, Inc.
378	Williams	Ws-14	IM-614	Dennis Winzeler
379	Wyandot	Wt-4	IM-520	Precision Sand & Gravel
380	Wyandot	Wt-5, Wt-15	IM-376	National Lime & Stone Co.
381	Wyandot	Wt-18	IM-551	National Lime & Stone Co.
382	Wyandot	Wt-17	IM-604	Kirby's Sand & Gravel, Inc.
384	Summit	St-53	IM-874	Portage Lakes Sand & Gravel Co.
385	Clark	Ck-501	IM-340	William H. Young, Daniel E. Demmy
386	Stark	Sk-203	IM-654	American Sand & Gravel
387	Portage	Pe-ASG	IM-212	American Sand & Gravel
388	Lawrence	Le-445	IM-928	D & D Sand Bank
389	Tuscarawas	Ts-1976	IM-941, IM-942	Benco Leasing, Inc.
390	Miami	Mi-T	IM-696	Ticon Corp.
391	Warren	Wan-B	IM-679	D & L Browning Excavating, Inc.
394	Ashtabula	Asa-S	IM-853	Joe Simak & Sons Trucking, Inc.
395	Scioto	So-100	IM-760	Scioto Valley Resources
396	Muskingum	Mum-261	IM-957	Lazy Acre Farms, Inc.
397	Tuscarawas	Ts-1977	IM-692	Heiser Stone Co.
400	Licking	Lg-502	IM-956	Dry Creek Gravel Co.
401	Fairfield	Fd-14	IM-933	Paul D. Beery Trucking Co.
403	Greene	Ge-40	IM-923	Donald Martin Contracting
404	Greene	Ge-42	IM-954	American Aggregates Corp.

**NUMERICAL INDEX OF OPERATORS OF MINES
SHOWN ON 1989 MINERAL INDUSTRIES MAP OF OHIO, BY COMMODITY—Continued**

SAND AND GRAVEL—Continued

<i>Map location number</i>	<i>County</i>	<i>State mine number</i>	<i>Division of Reclamation permit number</i>	<i>Name of operator</i>
405	Greene	Ge-32	IM-400	American Aggregates Corp.
406	Hardin	Hdn-5	IM-907	Crates Excavating
407	Hamilton	Hmn-69	IM-969	Whitewater Aggregates, Inc.
408	Knox	Kx-17	IM-968	Small's Sand & Gravel, Inc.
409	Richland	Rd-20	IM-617	Bolin & Bartley, Inc.
410	Muskingum	Mum-267	IM-914	Luburgh, Inc.
411	Logan	Lgn-40	IM-996	Cooper Sand & Gravel
412	Ashland	Ald-15	IM-944	Young's Sand & Gravel Co.
413	Ashtabula	Asa-18	IM-949	North Ridge Materials
414	Franklin	Fn-56	IM-980	S & S Aggregate, Inc.
415	Geauga	Gea-9	IM-132	Soltis Sand & Gravel
416	Holmes	Hs-96	IM-997	Spring Run Farm & Gravel
417	Huron	Hrn-16	IM-975	Erie Blacktop, Inc.
419	Licking	Lg-504	IM-991	Gary Roberts Excavating
420	Logan	Lgn-36	IM-1007	C. E. Duff & Son, Inc.
421	Lucas	Ls-S	IM-703	Sandman Sand & Stone, Inc.
422	Lucas	Ls-26	IM-1016	Maumee Haulers, Inc.
423	Marion	Mn-F	IM-990	Fleming Construction Co., Inc.
424	Monroe	Me-508	IM-1000	B & D Paving, Inc.
425	Muskingum	Mum-269	IM-1009	Salt Creek Materials, Inc.
427	Summit	St-54	IM-934	R & S, Inc.
428	Tuscarawas	Ts-2001	IM-1004	Newton Asphalt
429	Warren	Wan-46	IM-679	Ernst Material Service, Inc.
430	Warren	Wan-50	IM-1006	L & I Trucking & Construction, Inc.
431	Warren	Wan-52	IM-994	Carl E. Oeder & Sons Sand & Gravel
432	Washington	Wn-54	IM-383	Atlas Towing Co.
434	Hamilton	Hmn-56	IM-631	Barrett Paving Materials, Inc.
435	Stark	Sk-173	IM-879	Allied Corp., Inc.
437	Clark	Ck-7	IM-449	City of Springfield
438	Coshocton	Cn-828	IM-1026	William Albert Excavating, Inc.
440	Gallia	Ga-626	IM-1046	Cremeans Concrete & Supply
441	Greene	Ge-38	IM-333	Watson Gravel, Inc.
442	Geauga	Gea-39	IM-1104	B-M Machine Co.
443	Geauga	Gea-40	IM-977	Solon Excavators Sand & Gravel, Inc.
444	Logan	Lgn-12	IM-1193	C. E. Duff & Son, Inc.
445	Lucas	Ls-SM	IM-1062	Sandman Sand & Stone, Inc.
446	Miami	Mi-12	IM-467	Tipp Stone Co., Inc.
447	Miami	Mi-504	IM-1032	Stillwater Sand & Gravel
448	Muskingum	Mum-262	IM-422	Muskingum River Gravel Co.
451	Perry	Pe-89		Green Oaks Potting Products
452	Ross	Rs-M	IM-114	Muskingum River Gravel Co.
453	Stark	Sk-241	IM-582	Standard Slag Co.
454	Stark	Sk-242	IM-466	Earth & Wood Landscape Supplies, Inc.
455	Stark	Sk-243	IM-908	American Sand & Gravel
456	Wood	Wd-13	IM-998	G. M. Sader Excavating & Paving, Inc.

SANDSTONE/CONGLOMERATE ▼

<i>Map location number</i>	<i>County</i>	<i>State mine number</i>	<i>Division of Reclamation permit number</i>	<i>Name of operator</i>
1	Carroll	Cl-102	IM-278	Conotton Valley Quarries Co.
2	Stark	Sk-217	IM-750	Kohl Industries
3	Columbiana	Ca-855	IM-891	Beaver Creek, Inc.
4	Coshocton	Cn-13	IM-397	Briar Hill Stone Co.
5	Coshocton	Cn-659	IM-232	Briar Hill Stone Co.
6	Coshocton	Cn-686	IM-504	Briar Hill Stone Co.
7	Coshocton	Cn-692	IM-294	Briar Hill Stone Co.
8	Coshocton	Cn-695	IM-402	Briar Hill Stone Co.
13	Cuyahoga	Cya-42	IM-686	Boyas Excavating, Inc.
14	Erie	Ee-21	IM-416	Cleveland Quarries Co.
17	Geauga	Gea-3	IM-89	Best Sand Corp.
18	Geauga	Gea-1	IM-163	R. W. Sidley, Inc.

**NUMERICAL INDEX OF OPERATORS OF MINES
SHOWN ON 1989 MINERAL INDUSTRIES MAP OF OHIO, BY COMMODITY—Continued**

SANDSTONE/CONGLOMERATE—Continued

<i>Map location number</i>	<i>County</i>	<i>State mine number</i>	<i>Division of Reclamation permit number</i>	<i>Name of operator</i>
19	Holmes	Hs-49	IM-418	Briar Hill Stone Co.
20	Huron	Hrn-8	IM-268	Mesenburg Bros., Inc.
22	Knox	Kx-10	IM-444	Briar Hill Stone Co.
23	Knox	Kx-12	IM-445	Briar Hill Stone Co.
24	Knox	Kx-1	IM-269	Central Silica Co.
27	Lorain	Ln-3	IM-415	Cleveland Quarries Co.
30	Mahoning	Mg-62	IM-599	Gwin Contracting Co.
31	Perry	Py-202	IM-14	Central Silica Co.
34	Ross	Rs-16	IM-172	Southern Silica, Inc.
35	Scioto	So-47	IM-251	Taylor Stone Co., Inc.
36	Scioto	So-48	IM-140	Waller Bros. Stone Co.
37	Scioto	So-76	IM-141	Waller Bros. Stone Co.
38	Scioto	So-82	IM-158	Waller Bros. Stone Co.
40	Trumbull	Tl-13	IM-777	Hard Rocks, Inc.
41	Tuscarawas	Ts-1818	IM-9	Kimble Clay & Limestone Co.
42	Tuscarawas	Ts-1660	IM-68	U.S. Silica Co.
43	Washington	Wn-45	IM-125	Alan Stone Co., Inc.
44	Coshocton	Cn-815	IM-939	Briar Hill Stone Co.
45	Pike	Pke-31	IM-835	Schrader Sand & Gravel
46	Coshocton	Cn-809	IM-909	Briar Hill Stone Co.

SHALE/CLAY □

<i>Map location number</i>	<i>County</i>	<i>State mine number</i>	<i>Division of Reclamation permit number</i>	<i>Name of operator</i>
1	Ashland	Ald-1	IM-334	London Tile Co.
2	Auglaize	Ae-7		Sandkuhl Tile Co.
4	Columbiana	Ca-505	IM-13	Ferris Coal Co., Inc.
5	Columbiana	Ca-205	IM-74	Summitville Tiles, Inc.
6	Coshocton	Cn-787	IM-610	General Clay Products Corp.
7	Cuyahoga	Cya-19	IM-95	Hydraulic Press Brick Co.
9	Franklin	Fn-1	IM-322	Claycraft Co.
10	Greene	Ge-8	IM-364	Southwestern Portland Cement Co.
11	Harrison	Hn-152	IM-42	Bowerston Shale Co.
12	Hocking	Hg-205	IM-21	General Clay Products Corp.
17	Holmes	Hs-56		Clark Clay Co.
18	Holmes	Hs-77	IM-545	General Clay Products Corp.
19	Holmes	Hs-67	IM-768	Holmes Limestone Co.
21	Jackson	Jkn-1001	IM-19, IM-336	Cedar Heights Clay Co.
22	Jackson	Jkn-1007	IM-24	Cedar Heights Clay Co.
23	Jackson	Jkn-367	IM-774, D-0273, D-0286, D-0594	Waterloo Coal Co., Inc.
24	Lawrence	Le-440	IM-828, IM-902	American Olean Tile Co.
25	Lawrence	Le-403	IM-738, D-0536	Belville Mining Co., Inc.
30	Lawrence	Le-308	IM-31	Kosmos Cement Co.
31	Licking	Lg-501	IM-257	Bowerston Shale Co.
34	Mahoning	Mg-608	IM-4	U.S. Cement, Inc.
36	Marion	Mn-7	IM-309	Glen-Gery Corp.
37	Medina	Ma-6	IM-455	General Clay Products Corp.
38	Muskingum	Mum-776	IM-256	Bowerston Shale Co.
39	Muskingum	Mum-24	IM-303	Columbia Portland Cement Corp.
41	Noble	Ne-66	IM-664	Towne Square Products
42	Paulding	Pg-1	IM-513	Lafarge Corp.
43	Perry	Py-296	IM-37	Dennis Clay Co.
45	Perry	Py-297	IM-850	Charles Kishler
46	Perry	Py-212	IM-58	Ludowici-Celadon Co.
47	Perry	Py-259	IM-80, D-0288	Nutter Bros. Coal Co., Inc.
52	Stark	Sk-663	IM-5	East Ohio Limestone Co.
53	Stark	Sk-217	IM-750	Kohl Industries
56	Tuscarawas	Ts-1517	IM-46	Belden Brick Co.
57	Tuscarawas	Ts-1646	IM-44	Belden Brick Co.

**NUMERICAL INDEX OF OPERATORS OF MINES
SHOWN ON 1989 MINERAL INDUSTRIES MAP OF OHIO, BY COMMODITY—Continued**

SHALE/CLAY—Continued

<i>Map location number</i>	<i>County</i>	<i>State mine number</i>	<i>Division of Reclamation permit number</i>	<i>Name of operator</i>
58	Tuscarawas	Ts-1841	IM-45	Belden Brick Co.
59	Tuscarawas	Ts-1939	IM-47	Belden Brick Co.
60	Tuscarawas	Ts-1960	IM-48	Belden Brick Co.
63	Tuscarawas	Ts-1818	IM-9	Kimble Clay & Limestone Co.
64	Tuscarawas	Ts-1884	IM-6	L & M Mineral Co.
65	Tuscarawas	Ts-1914	D-0701	L & M Mineral Co.
66	Tuscarawas	Ts-1981	IM-741	L & M Mineral Co.
67	Tuscarawas	Ts-1557, Ts-1558	IM-52	Stone Creek Brick Co.
69	Tuscarawas	Ts-1928	IM-98	Sugarcreek Clay & Limestone, Inc.
70	Tuscarawas	Ts-538	IM-27	Zoar Mining Co.
71	Tuscarawas	Ts-540	IM-28	Zoar Mining Co.
73	Wyandot	Wt-7	IM-407	Claycraft Co.
74	Muskingum	Mum-D	IM-917	Dennis Clay Co.
76	Stark	Sk-235	IM-945	Holmes Limestone Co.
77	Tuscarawas	Ts-1982	IM-621	L & M Mineral Co.
78	Tuscarawas	Ts-1994	IM-985	Eberhart Coal, Inc.
79	Columbiana	Ca-947	IM-935	Dome Minerals, Inc.
80	Lawrence	Le-449	D-0746	Belville Mining Co., Inc.
81	Athens	As-594		Athens Hocking Reclamation
82	Ashtabula	Asa-14	IM-563	Janson Soil Service, Inc.
83	Perry	Py-336	IM-1040	Nutter Bros. Coal Co., Inc.
84	Tuscarawas	Ts-1998	D-0735	Eberhart Coal, Inc.
85	Tuscarawas	Ts-520	IM-214	Blue Jay Enterprises
86	Geauga	Gea-9	IM-132	Soltis Sand & Gravel

SALT □ □

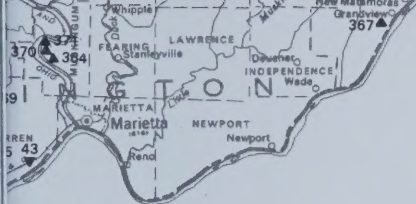
<i>Map location number</i>	<i>County</i>	<i>State mine number</i>	<i>Division of Reclamation permit number</i>	<i>Name of operator</i>
1	Cuyahoga	Cya-30		Akzo Salt, Inc.
2	Lake	Lke-6		Morton Thiokol, Inc.
3	Licking	Lg-45		R. H. Penick Co.
4	Summit	St-9127		International Salt Co.
5	Wayne	We-9129		Morton Thiokol, Inc.

GYPSUM ◆

<i>Map location number</i>	<i>County</i>	<i>State mine number</i>	<i>Division of Reclamation permit number</i>	<i>Name of operator</i>
1	Ottawa	Oa-2	IM-344	Celotex Corp.

PEAT ◇

<i>Map location number</i>	<i>County</i>	<i>State mine number</i>	<i>Division of Reclamation permit number</i>	<i>Name of operator</i>
1	Ashland	Ald-13		Mohican Organic Products, Inc.
2	Champaign	Cpn-9		Sphagnum Moss Peat Farm
4	Williams	Ws-17		Lingvai Peat Co.
7	Portage	Pe-89		Green Oaks Potting Products
8	Stark	Sk-242	IM-466	Earth and Wood Landscape Supplies, Inc.



STATE OF OHIO
George V. Voinovich, Governor
DEPARTMENT OF NATURAL RESOURCES
Frances S. Buchholzer, Director
DIVISION OF GEOLOGICAL SURVEY
Thomas M. Berg, Chief

MINERAL INDUSTRIES MAP OF OHIO

1989

COMPILED BY
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AND
CLARK L. SCHEERENS

This map is based on operators listed in the *1989 Report on Ohio mineral industries* and is intended for general reference. Assistance with locations was received from the Ohio Department of Natural Resources, Division of Reclamation.

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